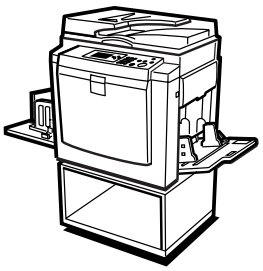
Operating Instructions



1 Before Using the Machine
2 Basics
3 Printing Functions
4 Troubleshooting
5 User Tools
6 Remarks
7 Specifications

Read this manual carefully before you use this machine and keep it handy for future reference. For safe and correct use, be sure to read the Safety Information before using the machine.

Introduction

This manual contains detailed instructions and notes on the operation and use of this machine. For your safety and benefit, read this manual carefully before using the machine. Keep this manual in a handy place for quick reference.

Important

Contents of this manual are subject to change without prior notice. In no event will the company be liable for direct, indirect, special, incidental, or consequential damages as a result of handling or operating the machine.

Notes:

Some illustrations in this manual might be slightly different from the machine.

Certain options might not be available in some countries. For details, please contact your local dealer.

The model names of the machines do not appear in the following pages. Check the type of your machine before reading this manual.

- LG drum: Not Available
- A4 drum: Type 1
- B4 drum: Type 2

Two kinds of size notation are employed in this manual. With this machine refer to the metric version.

The supplier shall not be responsible for any damage or expense that might result from the use of parts other than genuine parts from the supplier with your office products.

Power Source

220 – 240V, 50/60Hz, 0.7A or more

Please be sure to connect the power cord to a power source as above. For details about power source, see ⇒ p.115 “Power Connection”.

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Manuals for This Machine

The following manuals describe the operational procedures of this machine. For particular functions, see the relevant parts of the manual.

Note

❒ Manuals provided are specific to machine type.

❒ Adobe Acrobat Reader/Adobe Reader is necessary to view the manuals as a PDF file.

❖ **Safety Information (paper)**
Describes information about the safety precautions.

❖ **Easy Operation Guide (paper/PDF file - CD-ROM [*1])**
Describes information about the control panel and basic operations.

❖ **Operating Instructions (this manual) (paper/PDF file - CD-ROM [*1])**
Describes operations, functions, User Tools (initial setting, mode setting, etc.) and troubleshooting.

[*1] Provided on the CD-ROM labeled "Operating Instructions"

What You Can Do with this Machine

Below is a quick summary of this machine's features and where to look in this manual for more information

❖ **Basic Procedure**
See p.30 “Basic Procedure”.

❖ **Printing on Thick or Thin Paper**
See p.33 “Printing on Thick or Thin Paper”.

❖ **Selecting Original Type**
See p.36 “Original Type”.

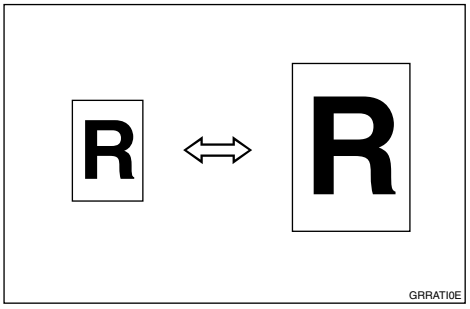
❖ **Adjusting the Print Image Position**
See p.37 “Adjusting the Print Image Position”.

❖ **Adjusting the Print Image Density**
See p.41 “Master making Density”.

❖ **Changing the Print Speed**
See p.39 “Changing the Printing Speed”.

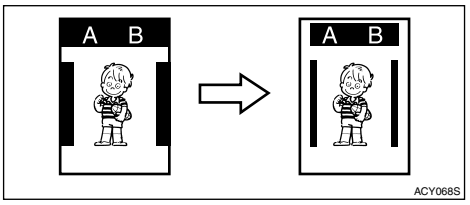
❖ **Fine Mode**
See p.42 “Fine Mode”.

❖ **Reducing and Enlarging Using Preset Ratios**



See p.42 “Preset Reduce/Enlarge”.

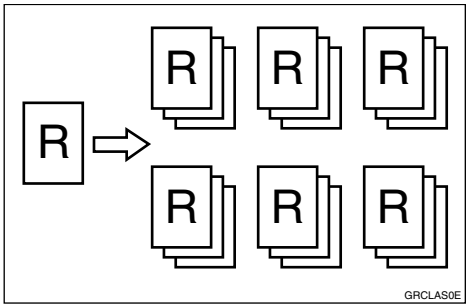
❖ **Erasing Edge Margins**



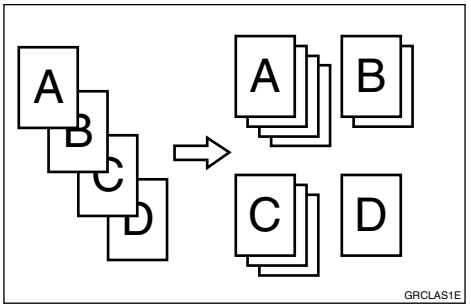
See p.43 “Erase Border”.

❖ **Saving Ink (Economy Mode)**
See p.44 “Economy Mode”.

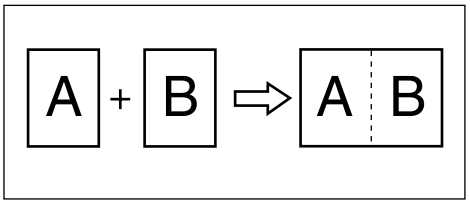
❖ **Printing per Class (Class Mode)**
See p.46 “Class Mode (print per class)”.



❖ **Printing per Original (Memory Mode)**
See p.47 “Memory Mode (print per original)”.



❖ **Combining Originals onto One Print**
See p.55 “Combine”.



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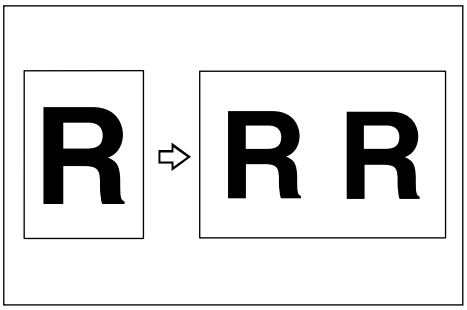
❖ **Repeating Original onto One Print**
See p.57 “Repeat”.



❖ **Skip Feed Printing**
See p.58 “Skip Feed Printing”.

❖ **Printing Secret Documents (Security Mode)**
See p.59 “Security Mode”.

❖ **Making Colour Prints**
See p.62 “Make Colour Prints”.

❖ **Printing in Two Colours**
See p.64 “Printing in Two Colours”.

Notice

Important

Do not copy or print any item for which reproduction is prohibited by law.

Copying or printing the following items is generally prohibited by local law:

bank notes, revenue stamps, bonds, stock certificates, bank drafts, checks, passports, driver's licenses.

The preceding list is meant as a guide only and is not inclusive. We assume no responsibility for its completeness or accuracy. If you have any questions concerning the legality of copying or printing certain items, consult with your legal advisor.

How to Read this Manual

Symbols

This manual uses the following symbols:

⚠ ***WARNING:***

Indicates important safety notes.

Ignoring these notes could result in serious injury or death. Be sure to read these notes. They can be found in the "Safety Information" section of About This Machine.

⚠ ***CAUTION:***

Indicates important safety notes.

Ignoring these notes could result in moderate or minor injury, or damage to the machine or to property. Be sure to read these notes. They can be found in the "Safety Information" section of About This Machine.

Important

Indicates points to pay attention to when using the machine, and explanations of likely causes of paper misfeeds, damage to originals, or loss of data. Be sure to read these explanations.

Note

Indicates supplementary explanations of the machine's functions, and instructions on resolving user errors.

Reference

This symbol is located at the end of sections. It indicates where you can find further relevant information.

[ ]

Indicates the names of keys that appear on the machine's display panel.

【 】

Indicates the names of keys on the machine's control panel.

Safety Information

When using this machine, the following safety precautions should always be followed.

Safety During Operation

In this manual, the following important symbols are used:

⚠ ***WARNING:***
Indicates a potentially hazardous situation which, if instructions are not followed, could result in death or serious injury.

⚠ ***CAUTION:***
Indicates a potentially hazardous situation which, if instructions are not followed, may result in minor or moderate injury or damage to property.

⚠ ***WARNING:***

- ***Do not damage, break or make any modifications to the power cord. Do not place heavy objects on it. Do not pull it hard nor bend it more than necessary. These actions could cause an electric shock or fire.***
- ***Disconnect the power plug (by pulling the plug, not the cable) if the power cable or plug becomes frayed or otherwise damaged.***
- ***To avoid hazardous electric shock, do not remove any covers or screws other than those specified in this manual.***
- ***Turn off the power and disconnect the power plug (by pulling the plug, not the cable) if any of the following occurs:***
  - ***You spill something into the machine.***
  - ***You suspect that your machine needs service or repair.***
  - ***The external housing of your machine has been damaged.***
- ***Keep the machine away from flammable liquids, gases, and aerosols. A fire or an electric shock might occur.***
- ***Connect the power cord directly into a wall outlet and never use an extension cord.***
- ***Only connect the machine to the power source described in this manual.***
- ***Disposal can take place at our authorized dealer or at appropriate collection sites.***

⚠ *CAUTION:*

- *After you move the machine, use the caster fixture to fix it in place. Otherwise the machine might move or come down to cause an injury.*
- *If you use the machine in a confined space, make sure there is a continuous air turnover.*
- *Keep the machine away from humidity and dust. Otherwise a fire or an electric shock might occur.*
- *Protect the machine from dampness or wet weather, such as rain and snow.*
- *Do not place the machine on an unstable or tilted surface. If it topples over, an injury might occur.*
- *Unplug the power cord from the wall outlet before you move the machine. While moving the machine, you should take care that the power cord will not be damaged under the machine.*
- *When you disconnect the power plug from the wall outlet, always pull the plug (not the cable).*
- *Do not allow paper clips, staples, or other small metallic objects to fall inside the machine.*
- *For environmental reasons, do not dispose of the machine or expended supply waste at household waste collection points. Disposal can take place at an authorized dealer.*
- *When disposing of a used ink container, reattach the cap to prevent ink from splattering.*
- *Be careful not to get ink on your clothes when replacing an ink container. Ink stains on clothes are hard to remove.*
- *Be careful not to cut yourself on any sharp edges when you reach inside the machine to remove misfed sheets of paper or masters.*
- *If ink comes into contact with your eyes, rinse immediately in running water. For other symptoms, consult a doctor.*
- *Keep the ink or ink container out of reach of children.*
- *If ink is ingested, induce vomiting by drinking a strong saline solution. Consult a doctor immediately.*
- *If your skin comes into contact with ink, wash the affected area thoroughly with soap and water.*
- *While printing, do not touch the belt at the end of the paper delivery tray or the job separator. Otherwise, an injury might occur.*
- *Our products are engineered to meet the high standards of quality and functionality, and we recommend that you only use the expendable supplies available at an authorized dealer.*

User Information on Electrical & Electronic Equipment

Users in the EU, Switzerland and Norway

Our Products contain high quality components and are designed to facilitate recycling.

Our products or product packaging are marked with the symbol below.

The symbol indicates that the product must not be treated as municipal waste. It must be disposed of separately via the appropriate return and collection systems available. By following these instructions you ensure that this product is treated correctly and help to reduce potential impacts on the environment and human health, which could otherwise result from inappropriate handling. Recycling of products helps to conserve natural resources and protect the environment.

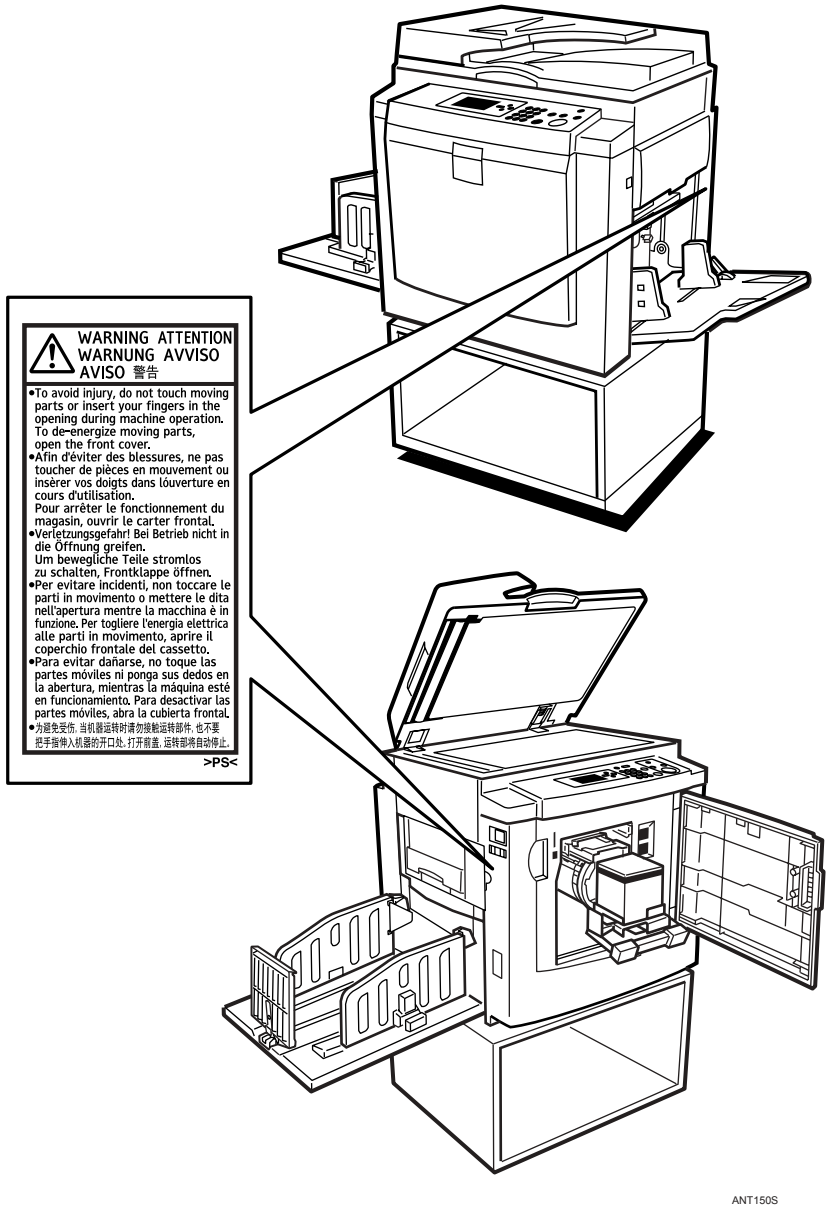
For more detailed information on collection and recycling systems for this product, please contact the shop where you purchased it, your local dealer or sales/service representatives.

All Other Users

If you wish to discard this product, please contact your local authorities, the shop where you bought this product, your local dealer or sales/service representatives.

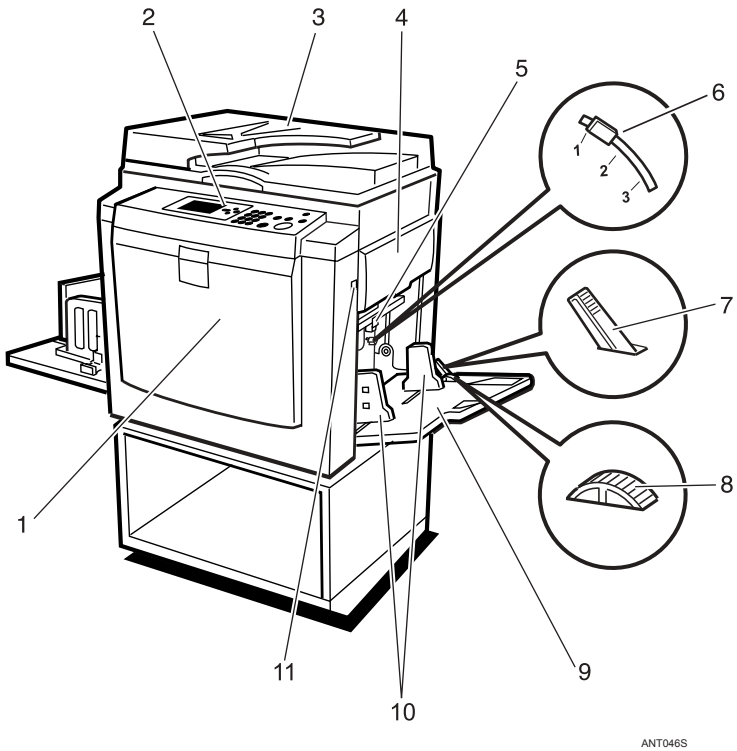
Positions of ⚠WARNING and ⚠CAUTION Labels

This machine has labels for ⚠WARNING and ⚠CAUTION at the positions shown below. For safety, please follow the instructions and handle the machine as indicated.


WARNING ATTENTION
WARNUNG AVVISO
AVISO 警告
•To avoid injury, do not touch moving parts or insert your fingers in the opening during machine operation. To de-energize moving parts, open the front cover.
•Afin d'éviter des blessures, ne pas toucher de pièces en mouvement ou insérer vos doigts dans louverture en cours d'utilisation. Pour arrêter le fonctionnement du magasin, ouvrir le carter frontal.
•Verletzungsgefahr! Bei Betrieb nicht in die Öffnung greifen. Um bewegliche Teile stromlos zu schalten, Frontklappe öffnen.
•Per evitare incidenti, non toccare le parti in movimento o mettere le dita nell'apertura mentre la macchina è in funzione. Per togliere l'energia elettrica alle parti in movimento, aprire il coperchio frontale del cassetto.
•Para evitar dañarse, no toque las partes móviles ni ponga sus dedos en la abertura, mientras la máquina esté en funcionamiento. Para desactivar las partes móviles, abra la cubierta frontal.
•为避免受伤, 当机器运转时请勿接触运转部件, 也不要把手指伸入机器的开口处. 打开前盖, 运转部将自动停止.
>PS<

ANT150S

Guide To Components



1. Front cover
Open for access to the inside of the machine.

2. Control panel
Operator controls and indicators are located here. See ⇒ p.13 "Control Panel".

3. Exposure glass cover (optional) or Auto Document Feeder (optional)
Lower this cover over an original on the exposure glass. If you have the ADF, load a stack of originals here. They will be fed automatically, one by one.

(The illustration shows the ADF.)

4. Master tray
Open this tray when installing the master.

5. Feed roller pressure lever
Use to adjust the contact pressure of the paper feed roller according to paper thickness.

6. Separation pressure lever
Use to prevent double feed.

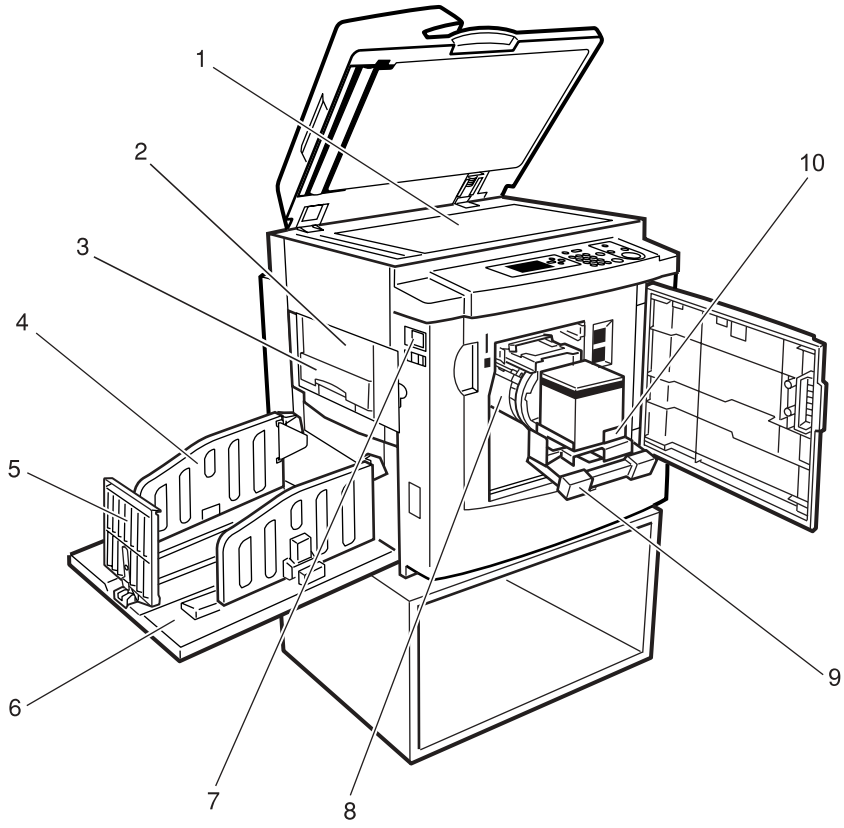
7. Paper feed side plate lock lever
Use to lock or unlock the paper feed side plates.

8. Side tray fine adjusting dial
Use to shift the paper feed tray sideways.

9. Paper feed tray
Set paper on this tray for printing.

10. Paper feed side plates
Use to prevent paper skew.

11. Paper feed tray down key
Press to lower the paper feed tray.



1. **Exposure glass**
Use to set the original.

2. **Master eject unit**
Open to remove the misfed master.

3. **Master eject box**
Used masters are stored here.

4. **Paper delivery side plates**
Use to align the prints on the paper delivery tray.

5. **Paper delivery end plate**
Use to align the leading edge of prints.

6. **Paper delivery tray**
Completed prints are delivered here.

7. **Main switch**
Use to turn the power on or off.

8. **Drum unit**
The master is wrapped around this unit.

9. **Drum unit lock lever**
Lift to unlock and pull out the drum unit.

10. **Ink holder**
Set the ink cartridge in this holder.

Options

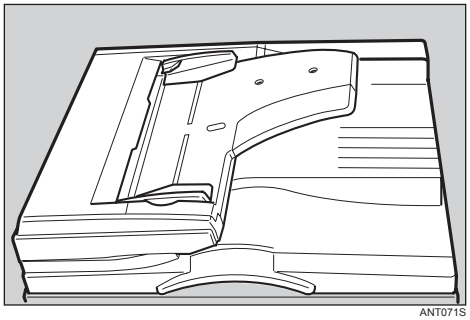
Option List

Options	Model Name
Auto Document Feeder (ADF)	DF Type 20
Exposure Glass Cover	Platen Cover Type 1018
Drum unit	Color Drum Type 20 A4 Color Drum Type 20 B4
Tape Dispenser	Priport Tape Maker Type 20
Key Counter	–

Guide to Major Options

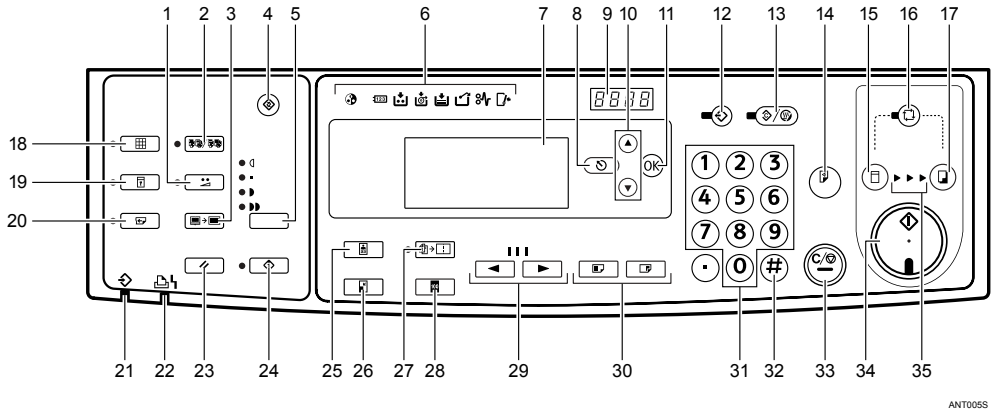
❖ Auto Document Feeder (ADF)

Load a stack of originals here. They will be fed automatically, one by one.



ANT071S

Control Panel



1. 【Economy】key

Press to save ink. See p.44 "Economy Mode".

2. 【Memory/Class】key

Press to select Memory or Class mode. See p.46 "Class Mode (print per class)" or p.47 "Memory Mode (print per original)".

3. 【Erase Border】key

Press to select erase margins on the prints. See p.43 "Erase Border"

4. 【User Tools】key

Press to change the default settings to suit your requirements. See p.103 "User Tools"

5. 【Master Making Density】key

Press to make prints darker or lighter. See ⇒ p.41 "Master making Density".

6. Indicators

Show errors and machine status.

:Colour Drum indicator

: Key Counter indicator

See p.95 "When Other Indicators Light".

: Add Ink indicator

See p.71 "When the Add Ink Indicator ( ) Lights".

: Master End indicator

See p.93 "When the Master End Indicator ( ) Lights and a Message is Displayed".

: Load Paper indicator

See p.69 "Loading Paper into the Paper Feed Tray".

: Master Eject indicator

See p.94 "When the Master Eject Indicator ( ) Lights".

: Misfeed indicator

See p.78 " Clearing Misfeeds".

: Open Cover/Unit indicator

See p.92 "When the Open Cover/Unit Indicator ( ) Lights and a Message is Displayed".

7. Panel Display

The panel display shows the machine status, error messages, and function menus.

8. 【Escape】key

Press to cancel a selection or an entry, and to return to the previous display.

9. Counter

Shows the number of prints entered. While printing, it shows the remainder that is to be printed.

10. 【▲】【▼】keys

Press to select an item on the panel display.

11. 【OK】key

Press to confirm a selection or an entry.

12. 【Program】key

Press to input or recall user programs. See p.60 "Program".

13. 【Clear Modes/Energy Saver】key

- Clear Modes
  Press to clear the previously entered job settings.
- Energy Saver
  Press to switch to and from Energy Saver Mode p.32 "Energy Saver Mode".

14. 【Proof】key

Press to make proof prints.

15. 【Master Making】mode select key

Press to select the master making mode.

16. 【Auto Cycle】key

Press to make masters and prints in a single operation. See p.30 "Basic Procedure"

17. 【Print】mode select key

Press to select the print mode.

18. 【Fine】key

Press to select the fine image. See ⇒ p.42 "Fine Mode".

19. 【Security】key

Press to make prints of secret documents. See p.59 "Security Mode".

20. 【Skip Feed】key

Press to select skip feed printing. Seep.59 "Security Mode".

21. Data In indicator (Green)

- On: Data waiting for Master Making and printing is in the machine.
- Blinking: Data is being received, or Master Making or printing is in progress.
- Off: Master Making and printing are completed.

22. Error indicator (Red)

- On: An error has occurred. Master Making and printing stops.
- Off: Normal status

23. 【Job Reset】key

Press to cancel the data from an optional PC controller.

24. 【Hold Data-in】key

Press to reject the online print temporarily.

25. 【Original Type】key

Press to select Text, Photo, Text/Photo, or Pale mode. See ⇒ p.36 "Original Type".

26. 【Reduce/Enlarge】key

Press to reduce or enlarge the image by preset ratios. Seep.42 "Preset Reduce/Enlarge".

27. 【Combine/Repeat】key

Press to combine two originals onto one print. See p.55 "Combine".

Press to repeat the image of an original on one print. See p.57 "Repeat".

28. 【Full Size】key

Press to make full size prints.

29. 【◄】and【►】keys (Speed keys)

Press to adjust the printing speed. See ⇒ p.39 "Changing the Printing Speed".

30. 【Image Position】key

Press to shift the image forwards or backwards. See ⇒ p.37 "Adjusting the Print Image Position".

31. Number keys

Press to enter the desired number of prints and data for selected modes.

32. 【#】key

Press to enter data in selected modes.

33. 【Clear/Stop】key

Press to cancel a number you have entered or to stop printing.

34. 【Start】key

Press to start making masters or printing.

35. Processing indicators

Shows the process of making master to printing.

Panel Display

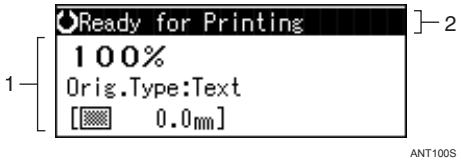
The panel display shows the machine status, error messages, and function menus.

Important

❒ Do not subject the panel display to strong impact or a force equivalent to 30N or more, otherwise it could be damaged.

Note

❒ When you select an item on the panel display, it is highlighted (e.g. 100).



1. **Menu for the function selected**

2. **Machine status or messages**

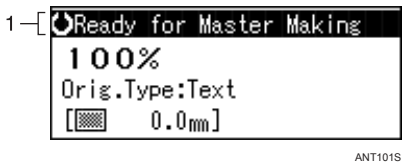
❖ Common keys

【**OK**】key	Press to confirm a selection or an entry.
【**Escape**】key	Press to cancel a selection or entry, and to return to the previous display.
【▲】【▼】keys	Press to select items on the panel display.

Panel Display Layout

The basic elements of the panel display are explained below. Understanding their meaning helps you use this machine's features quickly and easily.

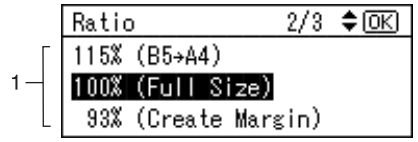
❖ Sample display when selecting the【Reduce/Enlarge】key



ANT101S

1. Machine status or messages

When the【**Reduce/Enlarge**】key is pressed, the following display is shown.



ANT102S

Functions and settings available:

- Press the【▲】【▼】keys to select an item.
- Press the【**OK**】key to confirm your settings.
- Press the【**Escape**】key to return to the previous display.

Originals

Size and Weights of Recommended Originals

❖ Metric version

Where original is placed	Original size	Original weight
Exposure glass	Up to A3 *1	--
ADF	Maximum: 297 mm × 432 mm Minimum: 105 mm × 128 mm	52–128 g/m^2

*1 This machine supports up to A3 size original. However the printed paper size allows only up to B4 size papers. When you're using an A3 size original, make sure to use the "Reduce" or "Combine" features.

❖ Inch version

Where original is placed	Original size	Original weight
Exposure glass	UP to 11" × 17" ▭ *1	--
ADF	Maximum: 11.7" × 17.0" Minimum: 4.1 " × 5.0 "	14–28 lb.

*1 This machine supports up to 11" × 17" size original. However the printed paper size allows only up to 8$^1/_2$" × 14" size papers. When you're using an 11" × 17" size original, make sure to use the "Reduce" or "Combine" features.

Note

❒ The maximum number of originals that can be placed in the ADF is about 30 (80 g/m^2, 20 lb).

❒ If you do not lift the exposure glass cover more than 30° when you place another original, the machine might not detect the next original correctly.

Non compatible originals for the Auto Document Feeder(ADF)

Placing the following types of originals in the ADF can cause paper misfeeds or result in damage to the originals. Place these originals on the exposure glass instead.

- Originals other than those specified on p.17 “Size and Weights of Recommended Originals”.
- Perforated or torn originals
- Curled, folded, or creased originals
- Pasted originals
- Originals with any kind of coating, such as thermal fax paper, art paper, aluminum foil, carbon paper, or conductive paper.
- Originals with indexes, tags, other projecting parts
- Stapled or clipped original
- Sticky originals such as translucent paper
- Thin originals that have low stiffness
- Thick originals such as postcards
- Bound originals such as books
- Transparent originals such as OHP transparencies or translucent paper

Print Paper

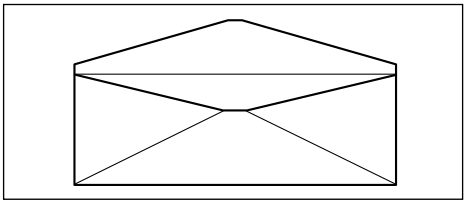
The following limitations apply:

	Paper Size		Paper Weight
	Metric	**Inch**	
Paper feed tray	B4 JIS ▭, A4 ▭, B5 JIS ▭ ▯, A5 ▭, B6 JIS ▭, A6 ▭ Others (Vertical: 90 - 268 mm, Horizontal: 148 - 388 mm)	$8^1/_2$" × 14" ▭, $8^1/_2$" × 11" ▭, $5^1/_2$" × $8^1/_2$" ▭ ▯, 8" × 13" ▭ Others (Vertical: 3.6" - 10.5", Horizontal: 5.9" - 15.2")	47.1 - 209.3 g/m², 12.5 - 55.6 lb

Non-recommended Paper

The following types of paper are not recommended for this machine:

- Roughly cut paper
- Paper of different thickness in the same stack
- Envelopes heavier than 85 g/m², 22 lb.
- Folded, curled, creased, or damaged paper
- Damp paper
- Torn paper
- Slippery paper
- Rough paper
- Paper with any kind of coating (such as carbon)
- Short grain paper
- Thin paper that has low stiffness
- Paper that is prone to generate a lot of paper dust
- Grained paper loaded with the direction of the grain perpendicular to the feed direction
- Certain types of long thin envelopes.
  E.g. international mail envelopes



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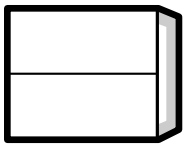
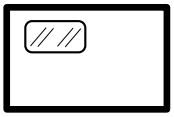
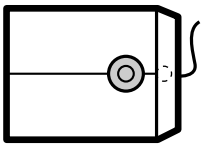
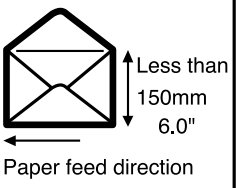
- The following types of envelopes

Envelopes with glue or gum	Envelopes with windows	Envelopes with round tags	Open envelopes
			

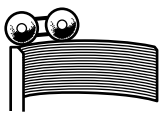
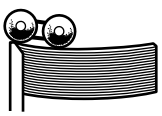
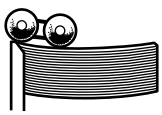
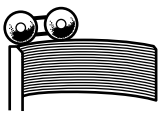
Note

❒ Do not use inkjet paper. It does not absorb ink well, print will smudge if rubbed, and the back of paper may be dirtied.

❒ If you print on rough grained paper, the print image might be blurred.

Important

❒ Correct curls in the paper before placing it in the machine. When you cannot correct the paper curl, stack the paper with the curl face down or face up as shown in the illustration. If the paper is curled, it might wrap around the drum or stains might appear.

	Right	Wrong
Thin Paper		
Thick Paper		

TPEY990E

Storing Paper

Note

❒ When storing paper, the following precautions should always be taken:

- Do not store paper where it will be exposed to direct sunlight.
- Avoid storing paper in humid (greater than 70%) areas.
- Store on a flat surface.

❒ Keep open reams of paper in the package and store as you would unopened paper.

Printing Size

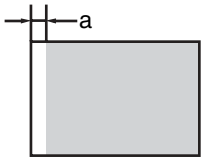
Maximum print size

- Type 1 (A4 drum) model:
  210 × 288 mm, 8.3" × 11.3"
- Type 2 (B4 drum) model:
  250 × 355 mm, 9.8" × 14.0"

At low temperatures, the maximum print size may be somewhat smaller.

Range that cannot be printed

The first 5 mm, 0.2" of the leading edge cannot be printed. When using the optional Auto Document Feeder, the first 5 mm, 0.2", of the leading edge as well as the last 2 mm, 0.08", of the trailing edge cannot be printed.

Original	Print
	

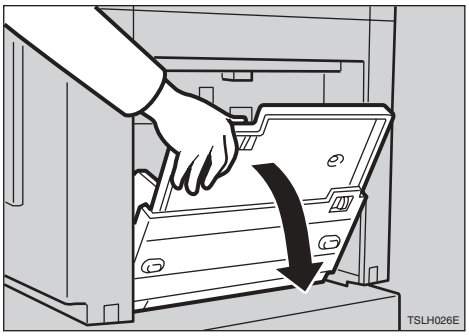
a: 5 mm, 0.2"

Printing Preparations

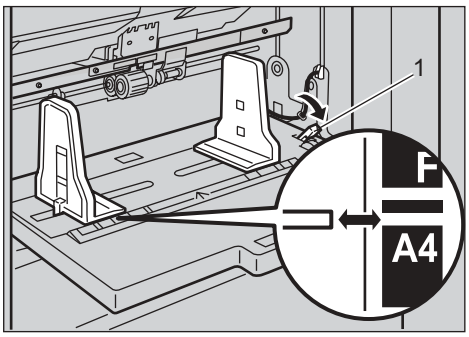
Using the Paper Feed Tray and Delivery Tray

Loading Paper

1 **Carefully open the paper feed tray.**

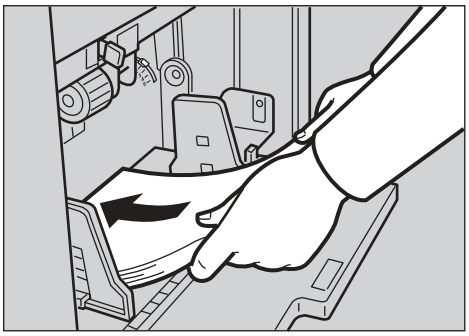


2 **Shift the paper feed side plates lock lever forward. Adjust the side plates to match the paper size.**



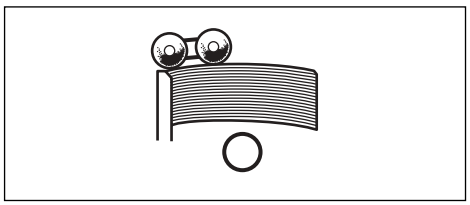
1: Paper Feed Side Plates Lock Lever

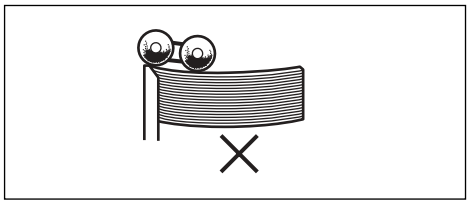
3 **Load paper into the paper feed tray.**



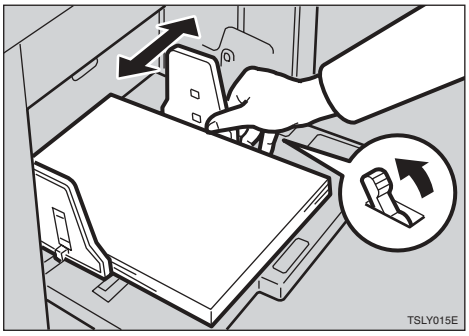
Note

❒ Correct the paper curl before setting the paper. If you cannot do so, stack the paper with the curl face down as shown.



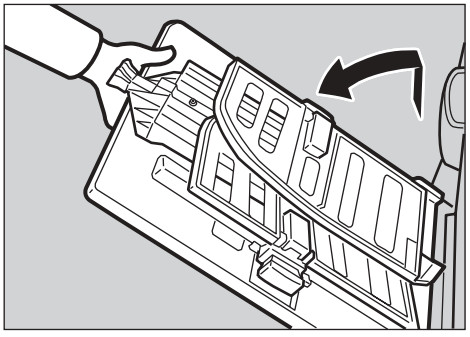


4 Make sure that the paper feed side plates touch the paper lightly. Shift the lock lever to its original position.

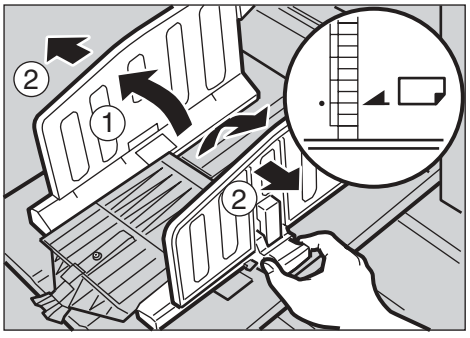


Setting Up the Paper Delivery Tray

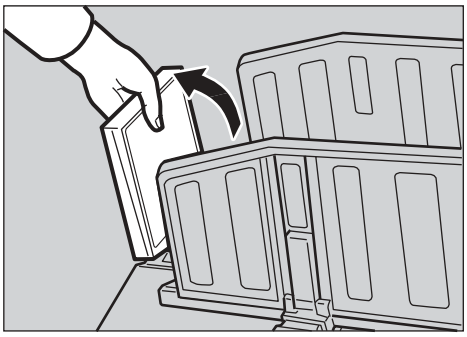
1 Open the paper delivery tray.



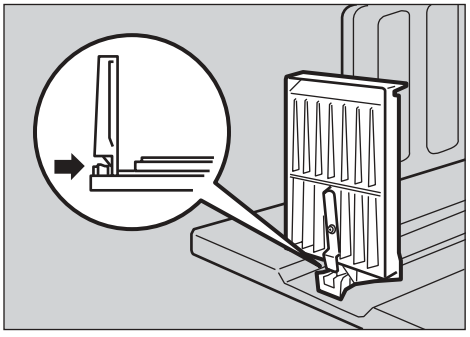
2 Lift the paper delivery side plates and adjust them to the paper size.



3 Lift the paper delivery end plate and move it to match the print paper size.



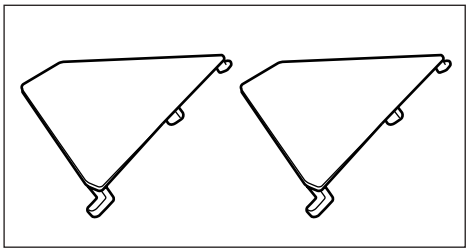
4 Lift the paper delivery end plate and adjust it to match the paper size.



Using the side plate guides

When printing on A4□, 8 1/2"□, B5 JIS□ □size paper and thin paper, you should attach the side plate guides to the side plates of the Paper Delivery Tray. Using the side plate guides allows you to properly assemble the printed papers on the Paper Delivery Tray.

Side plate guides

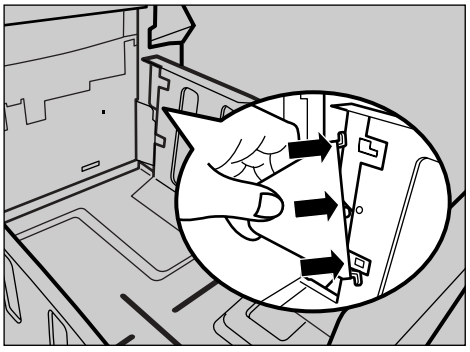


ANT040S

Note

❒ Side Plate guides come equipped with the machine.

❶ Insert the protruding portion into the Side Plate holes.

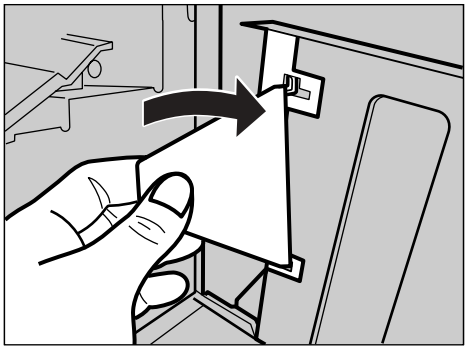


ANT041S

Note

❒ Insert the middle protruding portion first followed by the upper and lower portions.

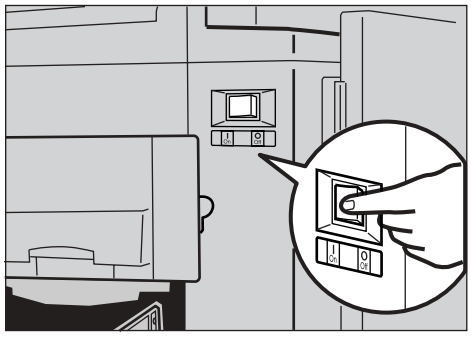
❷ Turn the Side Plate Guide to the direction shown by the arrow, and make sure it is fixed.



ANT042S

❸ After attaching the Side Plate Guide on one side, repeat the same process for the other side.

5 Turn on the main switch.



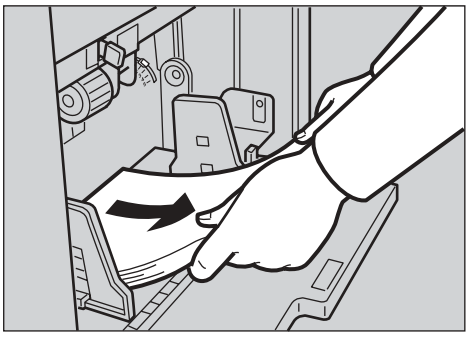
ANT076S

After Printing

This section shows you how to return the paper feed tray and paper delivery tray to their original positions.

Folding the Paper Feed Tray and Delivery Tray

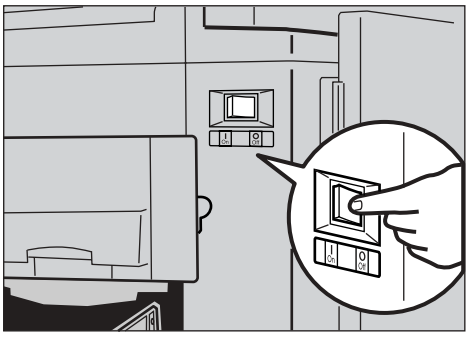
1 **Remove the paper from the paper feed tray.**



ANT073S

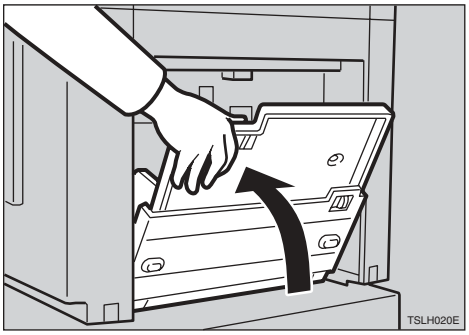
The paper feed tray will move down.

2 **Turn off the main switch.**



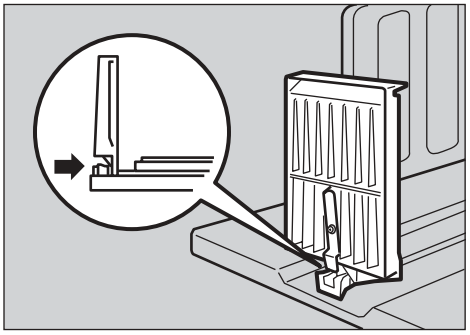
ANT077S

3 **Close the paper feed tray.**



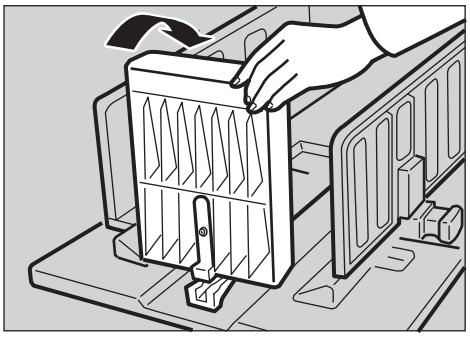
TSLH020E

4 **Move the end plate until the plate handle is flush with the end of the tray.**



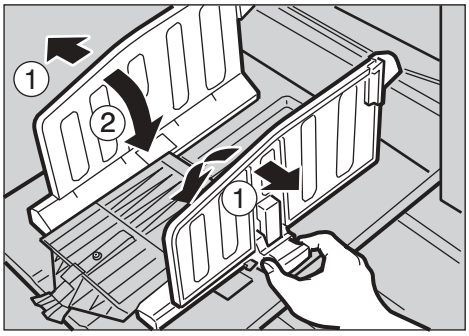
ANT038S

5 **Lower the end plate.**



ANT039S

6 **Move the side plates to the sides, then lower them.**



ANT036S

7 **Close the tray.**

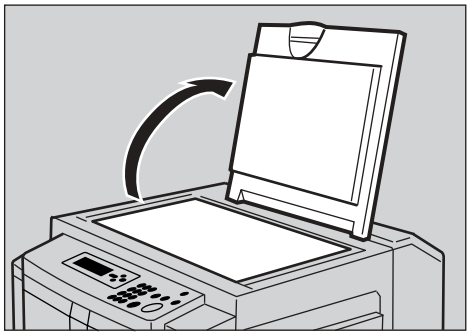
Placing Originals

When using the exposure glass, place the originals face down.

When using the ADF, place the originals face up.

Placing Originals on the Exposure Glass

1 **Lift the exposure glass cover.**

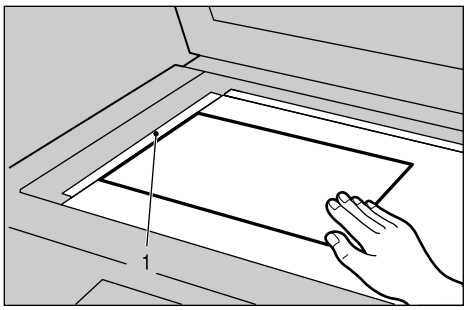


ANT064S

Note

❒ Be sure to lift the exposure glass cover more than 30°.

2 **Place the original face down on the exposure glass. The original should be aligned with the left scale.**



ACY070S

1. **Left scale**

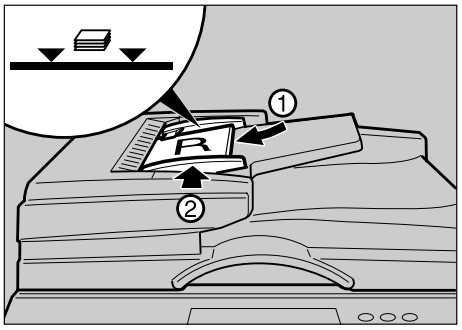
3 **Lower the exposure glass cover.**

4 **Adjust print settings as necessary, and then press the【Start】key.**

Placing Originals in the Auto Document Feeder

1 **Adjust the guide to the original size.**

2 **Insert the aligned originals face up into the ADF.**



AJK153S

Note

❒ To avoid originals misfeeding, fan the originals before placing them in the ADF.

Limitation

❒ Approximately 30 originals (80 g/m^2, 20 lb) can be inserted at a time in the ADF. The first (top) original will be fed first.

Note

❒ To avoid jamming, fan the originals before placing them in the ADF.

❒ The guides must fit snugly against both sides of the stack.

3 **Adjust print settings as necessary, and then press the【Start】key.**

Note

❒ If the next original has been placed in the ADF before the machine stops, that original is fed automatically.

Basic Procedure

When Auto Cycle mode is on, you can process masters and make prints in a single operation.

Note

❒ You can process masters and make prints in a single operation. See p.35 “Auto Cycle”.

❒ If the machine has user codes set, enter your user code using the number keys, and then press the 【OK】 key.

Reference

See p.109 “User Code”.

1 **Make sure no previous settings remain.**

Note

❒ If previous settings remain, press the 【Clear Modes/Energy Saver】 key before entering your settings.

2 **Place the originals.**

Reference

See p.28 “Placing Originals”.

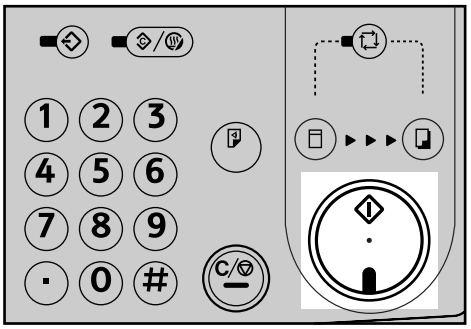
3 **Make sure the 【Master Making】 mode select key is lit.**

Note

❒ If it is not lit, press the 【Master Making】 mode select key.

4 **Make the necessary settings.**

5 **Press the 【Start】 key.**

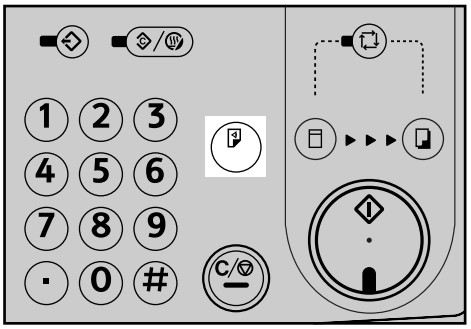


ANT015S

Master making starts.

Note

❒ Press the 【Proof】 key to check the image before making prints.

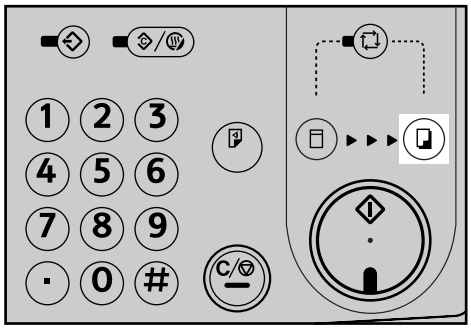


ANT010S

Reference

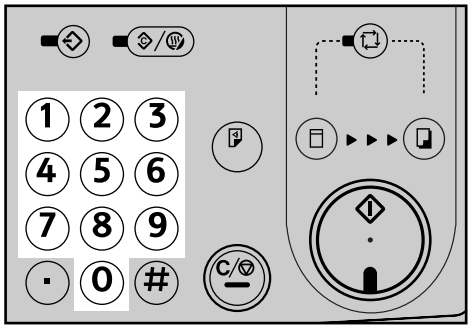
To change the image position, see p.37 “Adjusting the Print Image Position”.

6 **Make sure the【Print】mode select key is lit.**



ANT014S

7 **Enter the required number of prints using the number keys.**

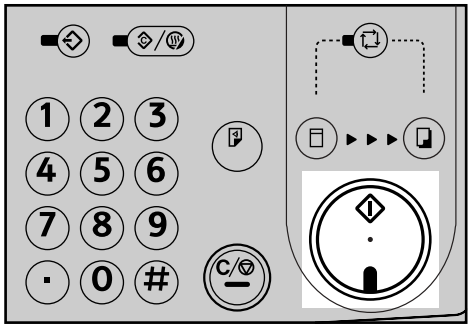


ANT008S

Note

❒ Set a print quantity between 1 (minimum) and 9999 (maximum).

8 **Press the【Start】key.**



ANT015S

Note

❒ When the print job finishes, press the【Clear Modes】key. Previously entered job settings are cleared.

How to operate

❖ **To stop the machine during a multi-print run**
Press the【Clear/Stop】key.

❖ **To return the machine to the initial condition after printing**
Press the【Clear Modes】key.

❖ **When clearing entered values**
Press the【Clear/Stop】key.

Energy Saver Mode

If the machine has not been operated for a certain period of time after printing, or when you press and hold the 【Clear Modes/Energy Saver】 key for 3 seconds, the panel display goes off and the machine enters Energy Saver mode. In Energy Saver mode, the machine consumes less electricity. Press the 【Clear Modes/Energy Saver】 key again, and the machine will return to the ready condition.

Note

❒ By default, the time taken for the machine to shift to Energy Saver mode is 3 minutes.

❒ You can change the waiting time within a range of 1 to 120 minutes. See "Energy Saver Timer"on p.104 "2 System".

❒ In the following cases, the machine will not shift automatically to Energy Saver mode.

- If there is no ink
- If originals are or paper is jammed
- If the machine has not finished making masters or prints
- If the machine is printing the second page of a Combine print
- If there is no master
- If the master eject box is full
- If there is an original in the optional Auto Document Feeder
- If the "cover open" indicator is lit
- If you are in the process of making changes to the user tools
- If the screen for entering a user code is displayed

Auto Reset

This machine can be set to return automatically to its initial condition if it has not been operated for a certain period of time. This is called "Auto Reset".

Note

❒ The Auto Reset time can be set from 1 to 5 minutes, or to "Off". See "Auto Reset Timer" on p.104 "2 System".

❒ The default for Auto Reset is Off.

❒ In the following cases, Auto Reset will not take place.

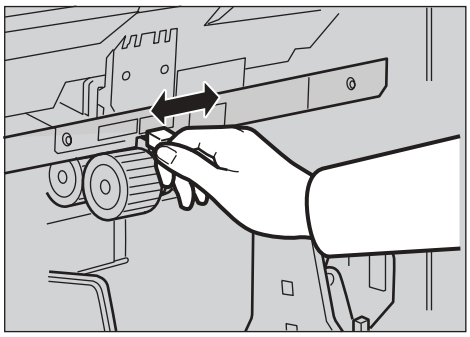
- If there is no ink
- If originals are or paper is jammed
- If the machine has not finished making masters or prints
- If the machine is printing the second page of a Combine print
- If there is no paper
- If there is no master
- If the master eject box is full
- If there is an original in the optional Auto Document Feeder
- If the "cover open" indicator is lit
- If you are in the process of making changes to the user tools
- If you have set Auto Reset to"Off"

Printing on Thick or Thin Paper

When you make prints on thick (127.9 to 209.3 g/m^2, 34.0 to 55.6 lb), standard (52.3 to 127.9 g/m^2, 13.9 to 34.0 lb) or thin (47.1 to 52.3 g/m^2, 12.5 to 13.9 lb) paper, perform the following steps.

Feed Roller Pressure Lever Position

1 Shift the feed roller pressure lever to the Thick, Standard, or Thin paper position.



ANT075S

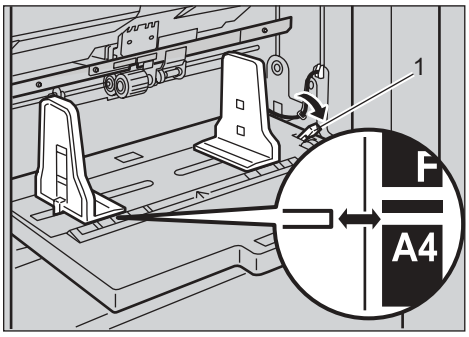
Note

❒ Shift the lever according to the paper weights as shown in the following table.

	Metric version	Inch version
Thick	127.9–209.3 g/m^2	34.0–55.6 lb.
Standard	52.3–127.9 g/m^2	13.9–34.0 lb.
Thin *1	47.1–52.3 g/m^2	12.5–13.9 lb.

*1 When paper is smaller than B5, $5^1/_2$" × $8^1/_2$" and heavier than 81.4 g/m^2(21.6 lb.), move the feed roller pressure lever to the Thin paper position.

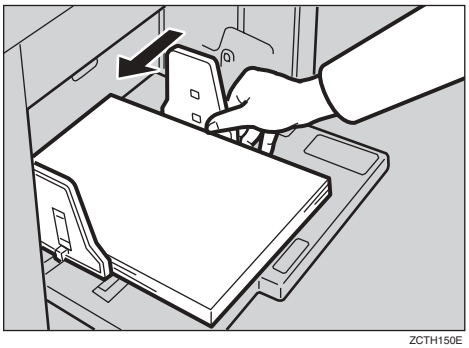
2 Shift the paper feed side plates lock lever forward. Adjust the side plates to match the paper size.



ANT072S

1: Paper Feed Side Plates Lock Lever

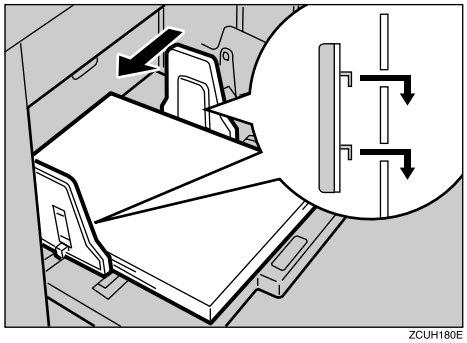
3 Make sure that the paper feed side plates touch the paper lightly.



ZCTH150E

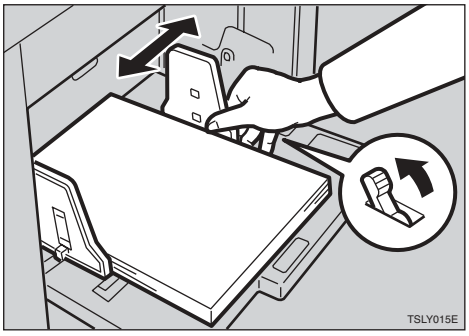
When printing onto thin paper

❶ **Set the side pads to both sides of the paper feed side plates. Make sure that the paper feed side plates touch the paper lightly.**



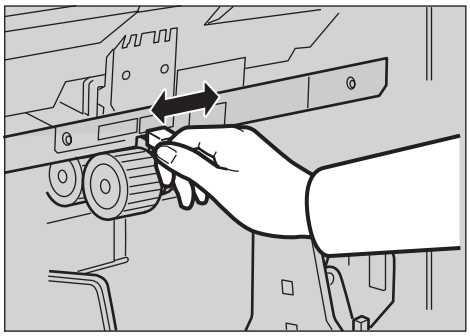
ZCUH180E

4 **Shift the lock lever to its original position.**



TSLY015E

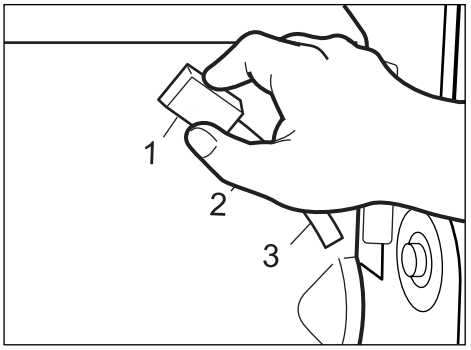
5 **When you finish printing, shift the feed roller pressure lever to the Standard paper position.**



ANT075S

Separation Pressure Lever Position

1 **To prevent double feed, adjust the paper separation pressure using the separation pressure lever.**



ANT117S

Note

❒ Paper separation pressure can be adjusted according to the paper weights as shown in the following table.

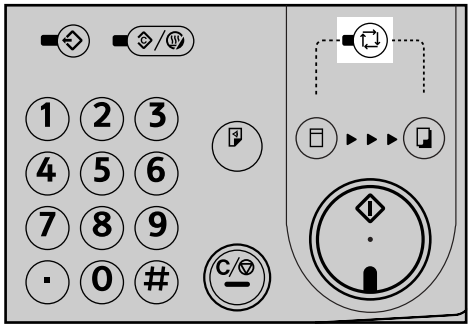
Position	Metric version	Inch version
1	Use this position if the leading edge of the paper is curled, or when the paper does not feed properly at Position 2.	
2 *1	81.6–209.4 g/m^2	21.7–55.6 lb.
3	47.1–81.5 g/m^2	12.6–21.6 lb.

*1 This position can also be used if the leading edge of the paper is curled, or when the paper does not feed properly.

Auto Cycle

Using the default settings, you can process masters and make prints in a single operation. This is called "Auto Cycle".

1 **Make sure the 【Auto Cycle】 key is lit.**



Note

❒ If it is not lit, press the 【Auto Cycle】 key.

2 **Place your originals.**

Reference

See p.28 “Placing Originals”.

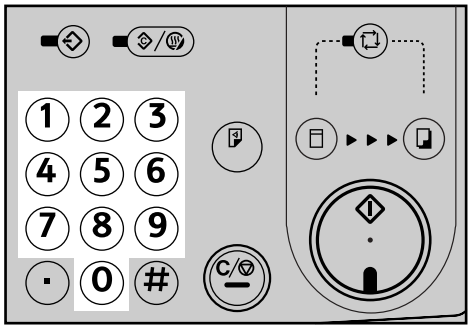
3 **Make sure the 【Master Making】 mode select key is lit.**

Note

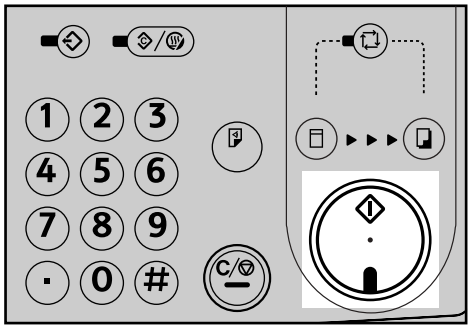
❒ If it is not lit, press the 【Master Making】 mode select key.

4 **Make the necessary settings.**

5 **Enter the required number of prints using the number keys.**



6 **Press the 【Start】 key.**



Note

❒ When the print job finishes, press the 【Clear Modes】 key. Previously entered job settings are cleared.

Original Type

Select one of the following four types to match your originals:

❖ **Text**
Specify this if the original document consists primarily of text.

❖ **Text/Photo**
If the original document contains a combination of text and photographs, it is printed using the optimum image balance.

❖ **Photo**
Specify this for photographs, pictures, or coloured documents.

❖ **Pale**
When printing pale colours, the master is created using pale colour print.

Note

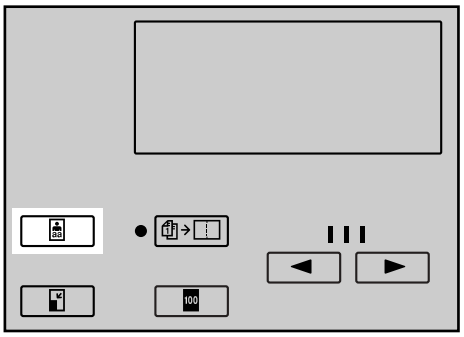
❒ You can specify the original type that is selected by default when the power is turned on. See "Original Type" on p.106 "4 Initial Settings".

❒ The default is Text mode.

❒ Moire patterns may occur when you are printing from screened originals.

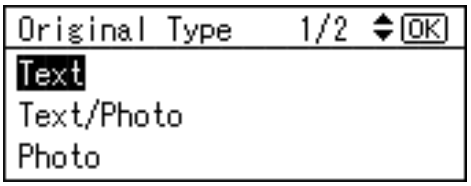
❒ When using Photo mode to print originals with both text and photographs, the text might appear faint. To avoid this, use Text/Photo mode instead.

1 **Press the 【Original Type】 key.**



ANT016S

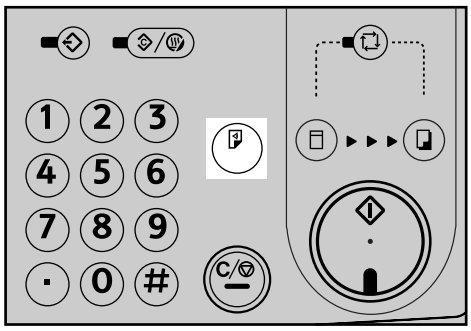
2 **Use the 【▲】【▼】 keys to select the type of original, and then press the 【OK】 key.**



Sample Print and Adjustment

Once the master making has been completed, it is possible to confirm the print finish before pressing the 【Print】 mode select key to start the printing process.

1 **Press the 【Proof】 key.**



A single printed page is ejected.

Note

❒ Press the key continuously to eject printed pages in succession.

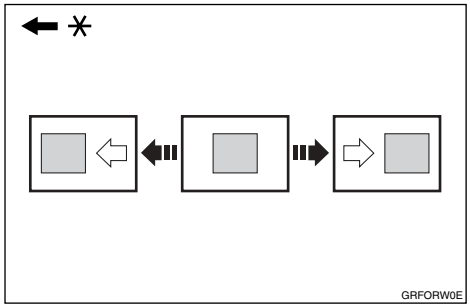
Adjusting the Print Image Position

After master making, you can adjust the print image position to suit your needs. There are two ways:

❖ **Shifting the Image Position Forward or Backward**
Shift the image position using the 【Image Position】 keys.

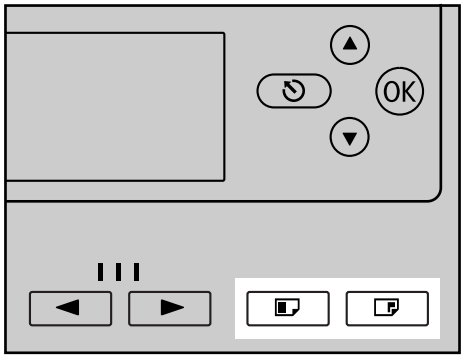
❖ **Shifting the Image Position to the Right or Left**
Shift the image position using the side tray fine adjusting dial.

Shifting the Image Position Forward or Backward



* Paper feed direction

1 **Press the left 【Image Position】 key to move the image forwards, the right key to move it backwards.**



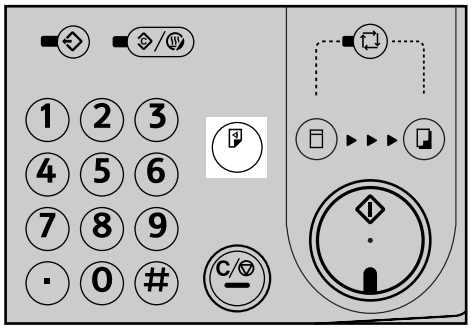
Note

❒ When you shift the image forwards, leave a margin (more than 5 mm, 0.2") at the leading edge. If there is no margin, paper might wrap around the drum and cause a misfeed.

❒ The right or left 【Image Position】 keys shift the image about 0.5 mm, 0.02" each time they are pressed.

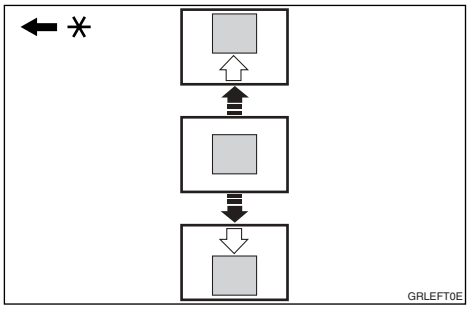
❒ The value of the image position that shifted is displayed on the panel display.

2 **Press the【Proof】key to check the image position.**



ANT010S

Shifting the Image Position to the Right or Left



GRLEFT0E

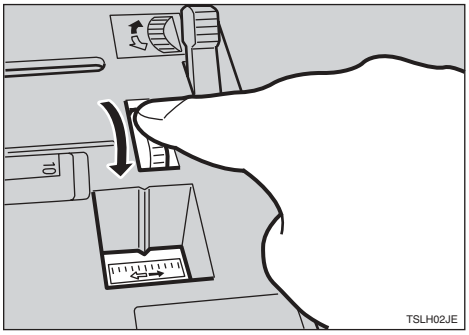
* Paper feed direction

1 **Turn the side tray fine adjusting dial as shown in the illustrations.**

❖ **Shifting the image to the right**

TSLH02IE

❖ **Shifting the image to the left**



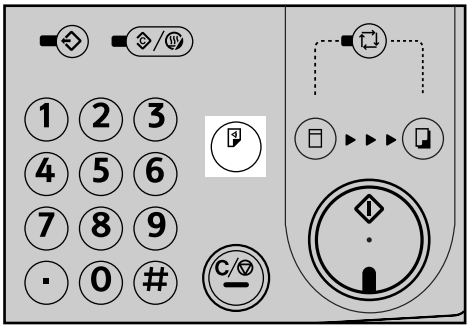
TSLH02JE

Note

❒ The image position can be shifted up to about 10 mm, 0.4" each way. Each division on the scale is 2 mm, 0.08".

2 **Adjust the paper delivery side plates to the print paper position.**

3 **Press the【Proof】key to check the image position.**

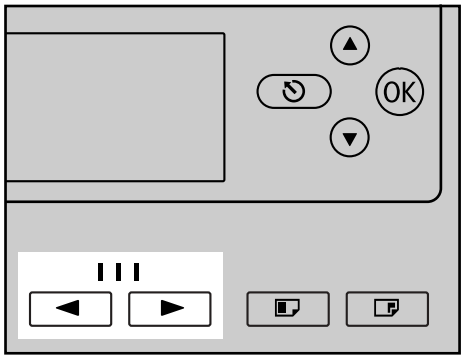


ANT010S

Changing the Printing Speed

Use the [◄] or [►] key to adjust the speed of the machine with the image density and printing paper.

1 Press the [►] key to increase the speed and press the [◄] key to reduce the speed.



Note

❒ The following speeds are available:

- Setting 1:
  80 sheets/minute
- Setting 2:
  100 sheets/minute
- Setting 3:
  130 sheets/minute

❒ As a default setting, setting 2 is selected.

Printing Functions

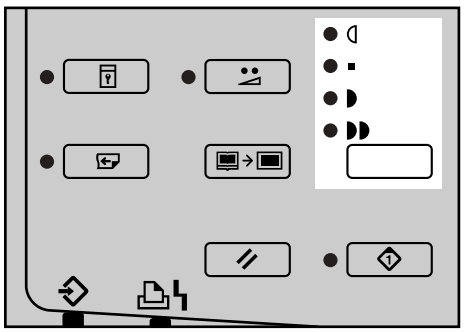
Master making Density

You can adjust the image density to suit your needs.

Note

❒ You can specify the image density that is selected by default when the power is turned on. See "Master Making Density" on p.106 "4 Initial Settings".

1 **Press the【Master Making Density】key to select the density you want to set.**



ANT030S

Note

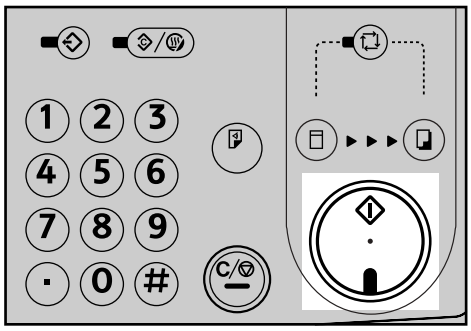
❒ If your original has a coloured background such as red or blue, select a lighter image density to prevent the prints from appearing dirty.

2 **Make sure the【Master Making】mode select key is lit.**

Note

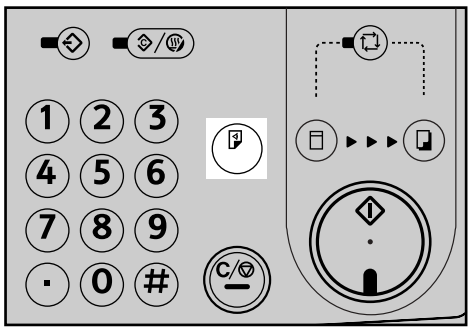
❒ If it is not lit, press the【Master Making】mode select key.

3 **Press the【Start】key.**



ANT015S

4 **Press the【Proof】key to check the print image density.**



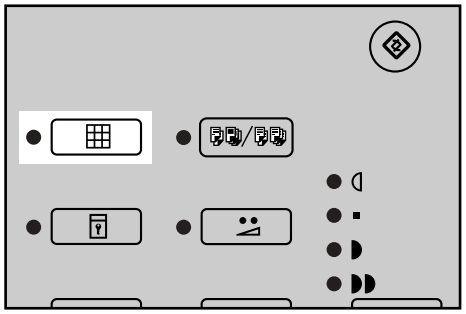
ANT010S

Fine Mode

Use the 【Fine】 key to make clear prints.

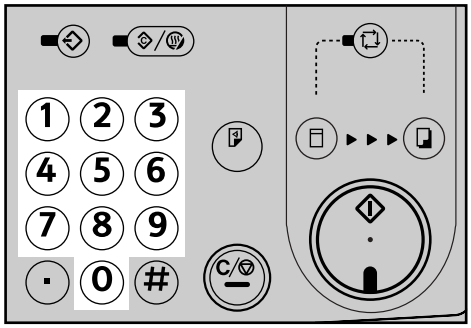
1 Set your originals.

2 Press the 【Fine】 key to select Fine mode.



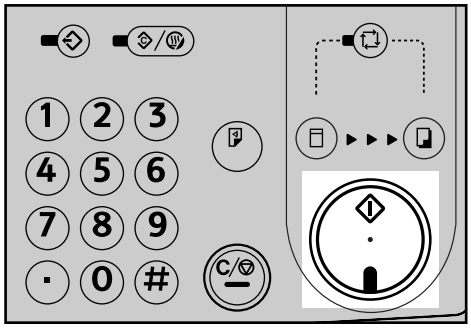
ANT025S

3 Enter the number of prints with the number keys.



ANT008S

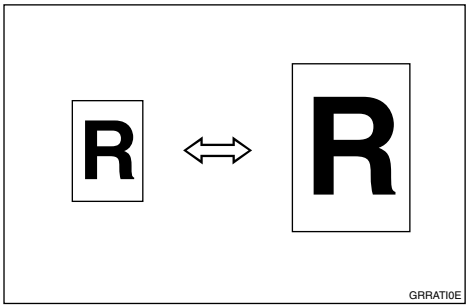
4 Press the 【Start】 key.



ANT015S

Preset Reduce/Enlarge

Use this function to reduce or enlarge originals by a preset ratio.



GRRATI0E

Note

❒ You can select a ratio regardless of the size of the original or the printing paper. However, with some ratios, parts of the image might not be printed or margins will appear on prints.

❒ You can choose from 7 preset ratios (3 enlargement ratios and 4 reduction ratios).

❖ Metric version

Ratio (%)	Original → Print paper size
141	A5 → A4, B5 JIS → B4 JIS
122	A4 → B4 JIS, A5 → B5 JIS
115	B5 JIS → A4
93	—
87	A3 → B4 JIS, A4 → B5 JIS
82	B4 JIS → A4, B5 JIS → A5
71	A3 → A4, A4 → A5, B4 JIS → B5 JIS

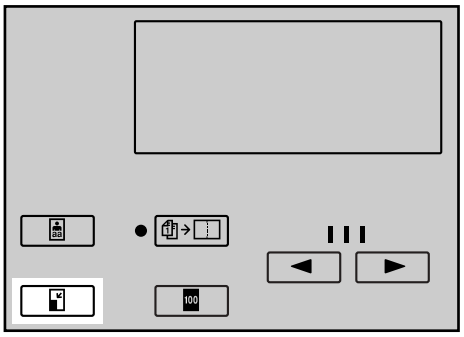
❖ **Inch version**

Ratio (%)	Original → Print paper size
155	5 1/2" × 8 1/2" → 8 1/2" × 14"
129	5 1/2" × 8 1/2" → 8 1/2" × 11"
121	8 1/2" × 14" → 11" × 17"
93	—
77	8 1/2" × 14" → 8 1/2" × 11"
74	11" × 15" → 8 1/2" × 11"
65	11" × 17" → 8 1/2" × 11", 8 1/2" × 11" → 5 1/2" × 8 1/2"

❒ You can specify the reproduction ratio that is selected by default when the power is turned on. See "Ratio" on p.106 "4 Initial Settings".

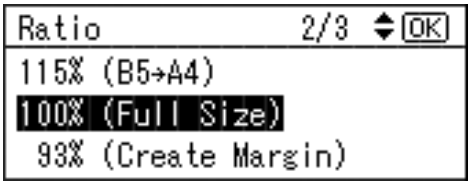
1 **Set your original.**

2 **Press the【Reduce/Enlarge】key.**

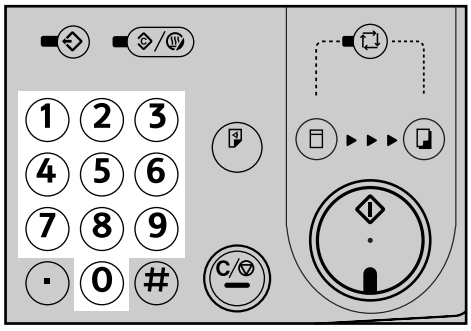


ANT018S

3 **Use the【▲】【▼】keys to select your desired reproduction ratio, and then press the【OK】key.**

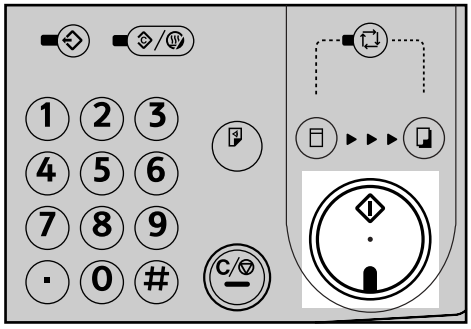


4 **Enter the number of prints with the number keys.**



ANT008S

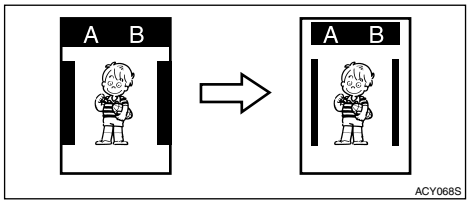
5 **Press the【Start】key.**



ANT015S

Erase Border

This function erases all four margins of the original or paper.



ACY068S

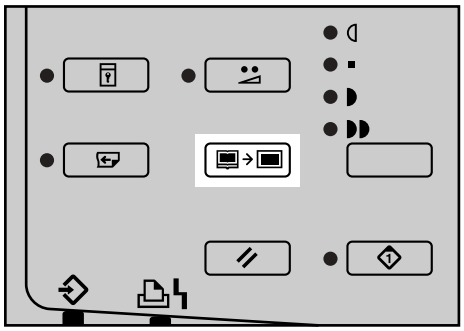
Note

❒ You can specify within a range of 0 to 20mm, 0" to 0.8", the width of the margin to be erased. See "Erase Border Width" on p.106 "4 Initial Settings".

❒ The default is 5 mm, 0.2".

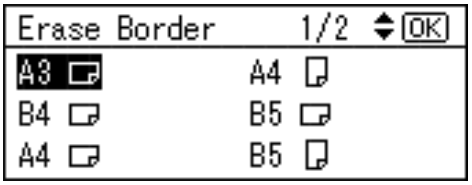
1 **Set your original.**

2 Press the【Erase Border】key.

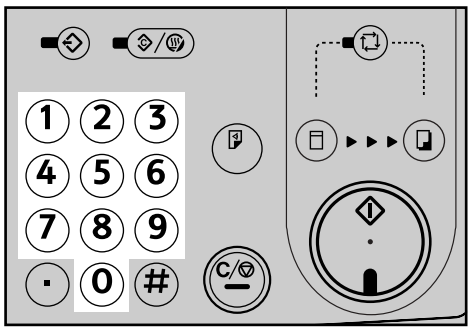


ANT032S

3 Use the【▲】【▼】keys to select the original size and orientation, and then press the【OK】key.

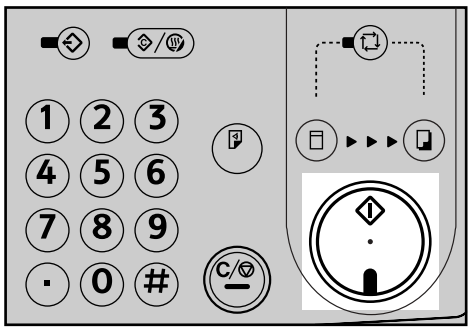


4 Enter the number of prints with the number keys.



ANT008S

5 Press the【Start】key.



ANT015S

Economy Mode

Use this function to save ink.

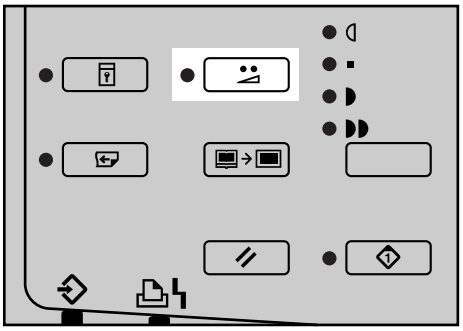
Note

❒ Prints will appear lighter when Economy mode is used.

❒ The default is Off. To select either "On" or "Off" for Economy mode, see "Economy Mode" on p.106 "4 Initial Settings".

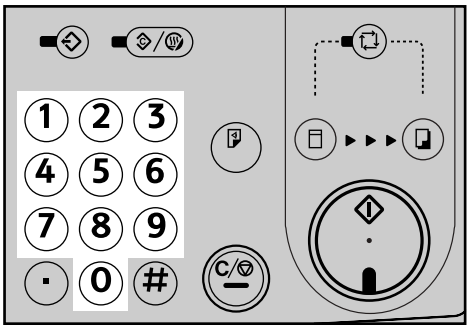
1 Set your original.

2 Press the【Economy Mode】key.



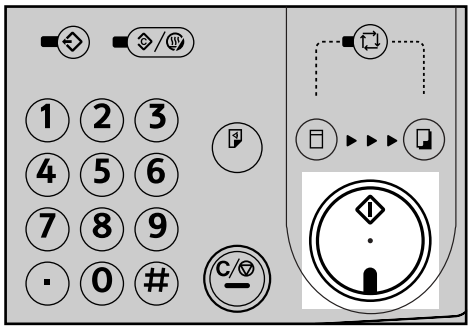
ANT029S

3 Enter the number of prints with the number keys.



ANT008S

4 **Press the [Start] key.**

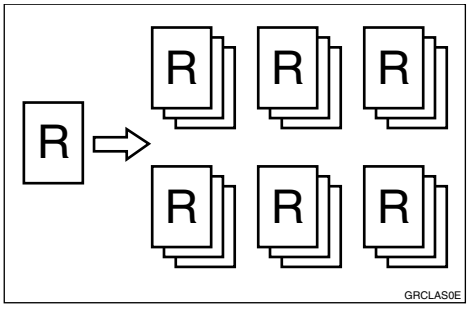


Memory/Class

The Memory/Class function is useful especially for people such as teachers, who often have to make different numbers of prints from the same original for different classes or have to make the same number of prints from a number of different originals for the same class.

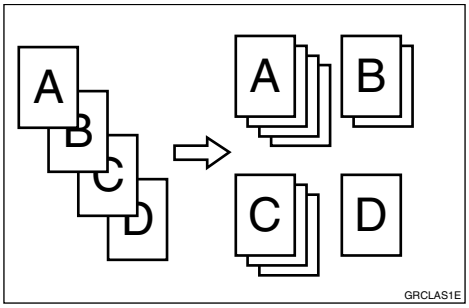
Under the Memory/Class function, the following modes are available:

❖ **Class Mode (print per class)**
Use to make prints from one original for multiple classes, with the same number of prints for each class.

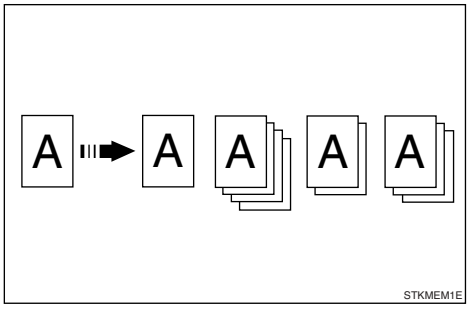


❖ **Memory Mode (print per original)**
You can choose from the following two types of Memory mode:

- Normal Memory Mode
  Use to make prints from a number of different originals. A different number of prints is made from each original.



- Stack Memory Mode
  Use to make prints from one original, with a different number of prints for each class.



Note

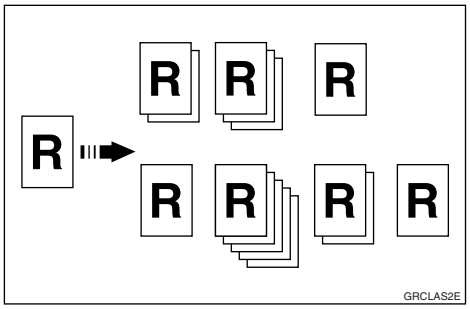
❒ You can specify either Normal Memory Mode or Stack Memory Mode as the default. See "Memory Mode Setting" on p.107 "5 Mode Settings".

❖ **Recall Program**
Use to recall settings that you have stored under the Memory Mode and Class Mode.

❖ **Class/Year Mode**

Reference

If the use of this machine is not limited to school or college, you can choose to have this mode displayed as "Department" displayed instead of "Class/Year". See "Class Display" on p.105 "3 Set Operation Mode".



- All
  Use to make prints from the same original for all the registered classes in all the school years.
- Class
  Select to make prints from the same original for only the classes selected.
- Households
  Use to make prints from the same original for all the registered student households in the school.

Class Mode (print per class)

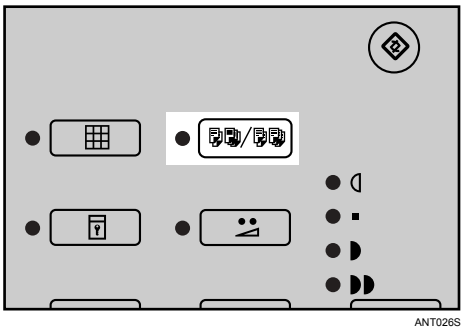
Note

❒ You can print for up to 24 combinations of number of prints and number of classes.

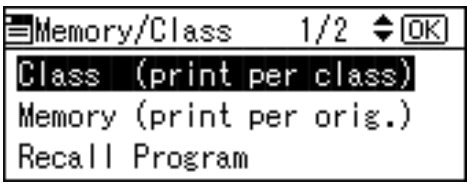
❒ The maximum possible number of classes in one combination is 99.

1 **Set your original.**

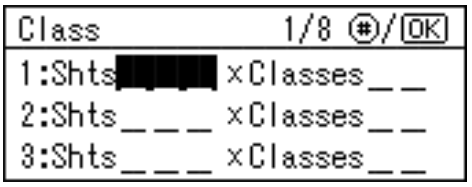
2 **Press the 【Memory/Class】 key.**



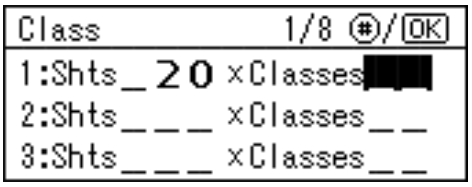
3 **Use the 【▲】【▼】 keys to select Class and then press 【OK】 key.**



4 **With the number keys, enter the desired number of prints, and the press the 【#】 key.**



5 **With the number keys, enter the desired number of classes, and then press the [#] key.**

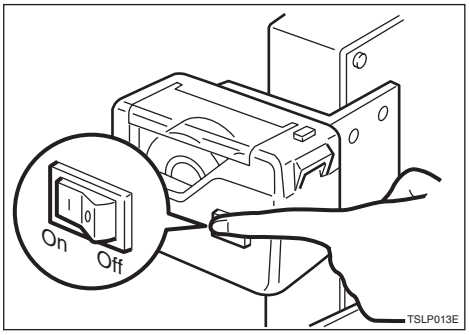


Note

❒ Repeat Steps **4** to **5** as desired.

6 **Press the [OK] key.**

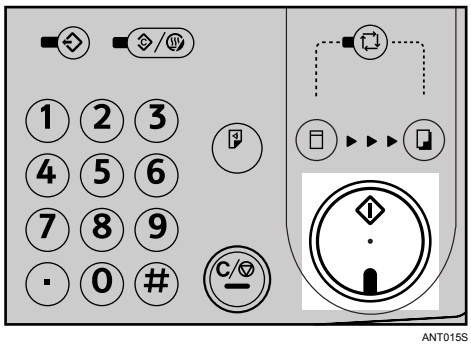
7 **If you are using the optional tape dispenser, turn on the tape dispenser switch.**



Note

❒ The optional tape dispenser automatically feeds out strips of paper to separate each group of prints.

8 **Press the [Start] key.**



Memory Mode (print per original)

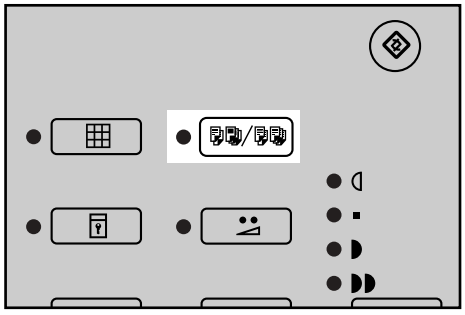
Normal Memory Mode

Note

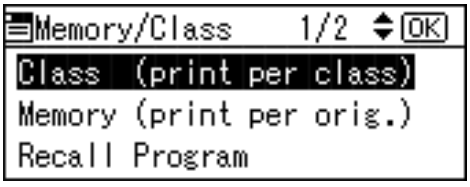
❒ You can make prints from up to 30 originals at one time.

1 **Set your original.**

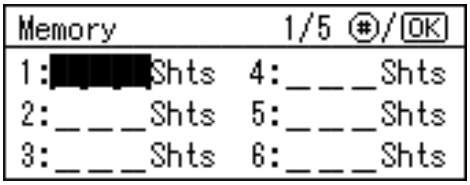
2 **Press the [Memory/Class] key.**



3 **Use the [▲][▼] keys to select Memory, and then press the [OK] key.**



4 **With the number keys, enter the desired number of prints for each original, and then press the [#] key.**

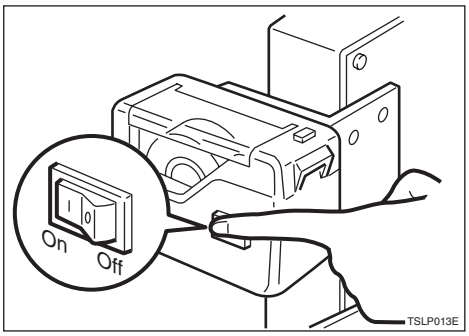


Note

❒ Repeat this step until you have entered for all the originals.

5 **Press the【OK】key.**

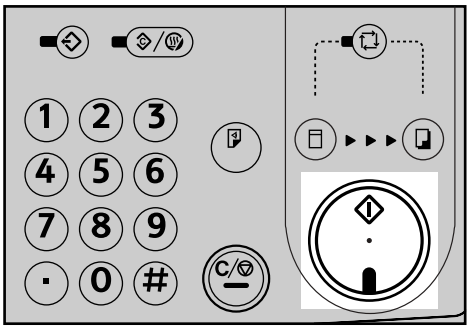
6 **If you are using the optional tape dispenser, turn on the tape dispenser switch.**



Note

❒ The optional tape dispenser automatically feeds out strips of paper to separate the prints made from each original.

7 **Press the【Start】key.**



Stack Memory Mode

Limitation

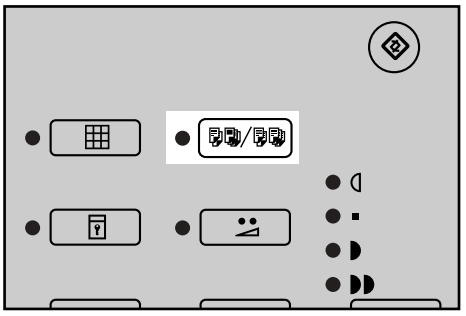
❒ To use Stack Memory mode, you need to first set Memory Mode to "Stack Mode" using the user tools. See "Memory Mode Setting" on p.107 "5 Mode Settings".

Note

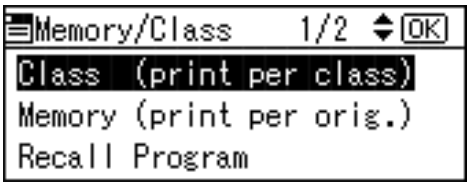
❒ You can make prints for up to 30 classes at one time.

1 **Set your original.**

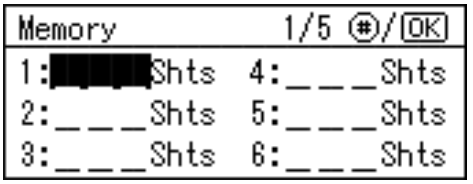
2 **Press the【Memory/Class】key.**



3 **Use the【▲】【▼】keys to select Memory, and then press the【OK】key.**



4 **With the number keys, enter the desired number of prints for each class, and then press the【#】key.**



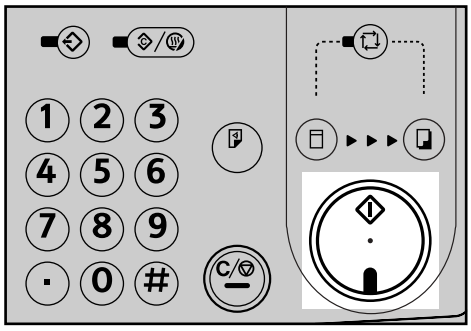
Note

❒ Repeat this step until you have entered for all your classes.

5 **Press the【OK】key.**

6 **If you are using the optional tape dispenser, turn on the tape dispenser switch.**

7 Press the [Start] key.



Recall Program

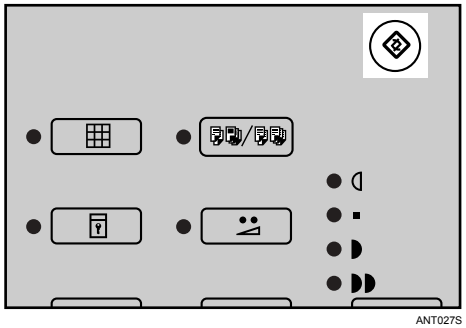
Note

❒ You can store up to 10 entries for Memory mode with each entry containing settings for up to 30 originals (Normal Memory mode), or settings for up to 30 classes (Stack Memory mode).

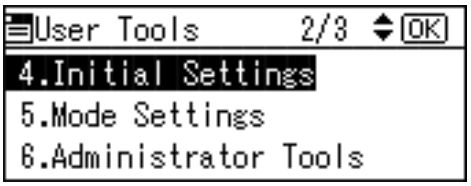
❒ You can store up to 10 entries for Class mode with each entry containing settings for up to 24 combinations of classes and numbers of prints.

Storing Normal Memory Mode Settings

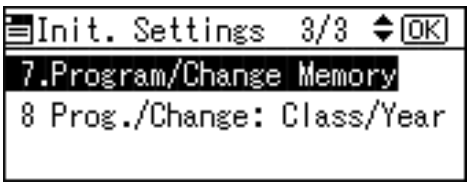
1 Press the [User Tools] key.



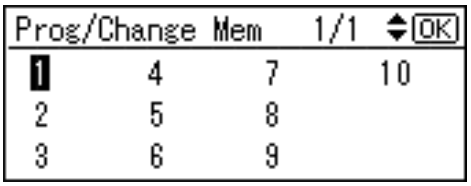
2 Use the [▲][▼] keys to select 4 Initial Settings, and then press the [OK] key.



3 Use the [▲][▼] keys to select 7 Program/Change Memory, and then press the [OK] key.



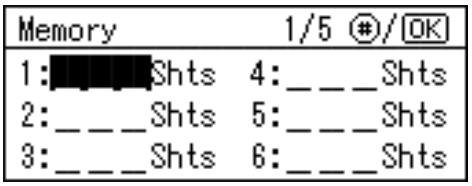
4 Use the [▲][▼] keys to select a number, and then press the [OK] key.



Note

❒ If the number is already in use, a message will be displayed asking if you wish to overwrite the settings stored. To overwrite, press the [OK] key. Otherwise press the [Escape] key to return to the previous display, and then select another number.

5 **With the number keys, enter the number of prints for each original, and then press the [#] key.**



Note

❒ Repeat Steps **4** and **5** to register all your originals.

6 **Press the [OK] key.**

7 **Press the [Clear Modes/Energy Saver] key.**

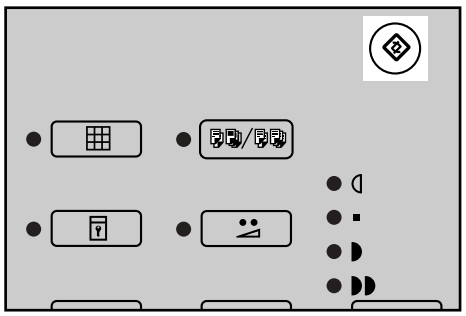
The contents that you have stored are now effective.

Storing Stack Memory Mode Settings

Limitation

❒ To use Stack Memory mode, you need to first set Memory Mode to "Stack" using the user tools. See "Memory Mode Setting" on p.107 "5 Mode Settings".

1 **Press the [User Tools] key.**



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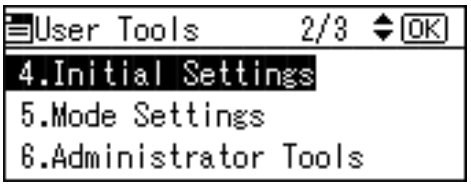
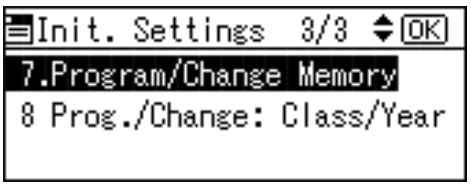
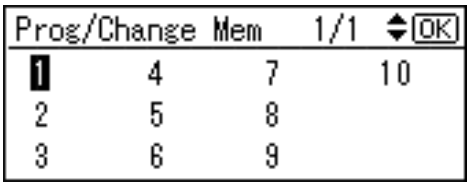
2 **Use the [▲][▼]keys to select 4 Initial Settings, and then press the [OK] key.**



3 **Use the [▲][▼] keys to select 7 Program/Change memory, and then press the [OK] key.**



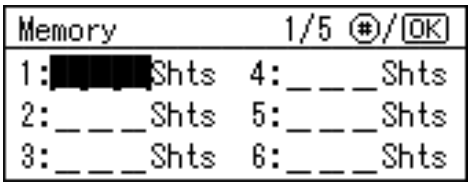
4 **Use the [▲][▼] keys to select a number, and then press the [OK] key.**



Note

❒ If the number is already in use, a message will be displayed asking if you wish to overwrite the settings stored. To overwrite, press the [OK] key. Otherwise press the [Escape] key to return to the previous display, and then select another number.

5 **With the number keys, enter the number of prints for each class, and then press the [#] key.**



Note

❒ Repeat Steps **4** and **5** to register all your classes.

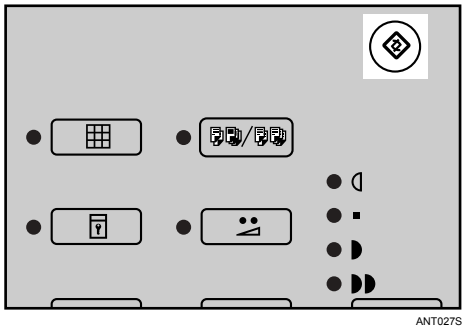
6 **Press the [OK] key.**

7 **Press the [Clear Modes/Energy Saver] key.**

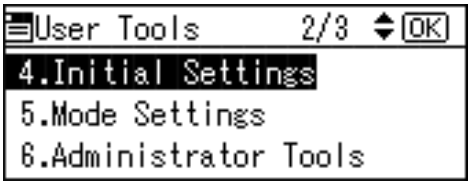
The contents that you have stored are now effective.

Storing Class Mode Settings

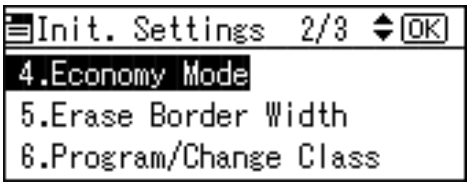
1 **Press the [User Tools] key.**



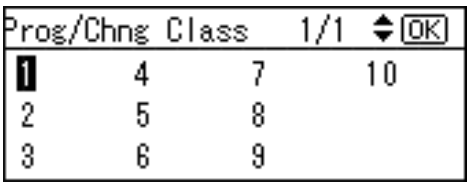
2 **Use the [▲][▼] keys to select 4 Initial Settings, and then press the [OK] key.**



3 **Use the [▲][▼] keys to select 6 Program/Change Class, and then press the [OK] key.**



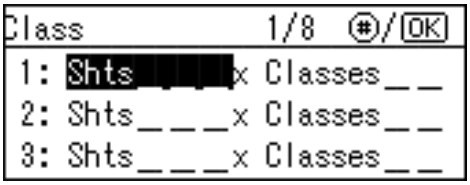
4 **Use the [▲][▼] keys to select a number, and then press the [OK] key.**



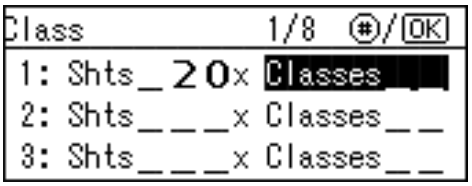
Note

❒ If the number is already in use, a message will be displayed asking if you wish to overwrite the settings stored. To overwrite, press the **[OK]** key. Otherwise press the **[Escape]** key to return to the previous display, and then select another number.

5 **With the number keys, enter the number of prints, and then press the [#] key.**



6 **With the number keys, enter the number of classes, and then press the [#] key.**



Note

❒ Repeat Steps **4** to **6** to register all your classes.

7 **Press the [OK] key.**

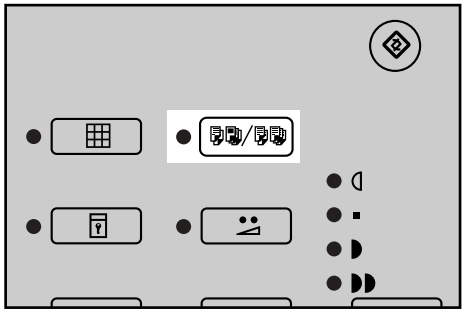
8 **Press the [Clear Modes/Energy Saver] key.**

The contents that you have stored are now effective.

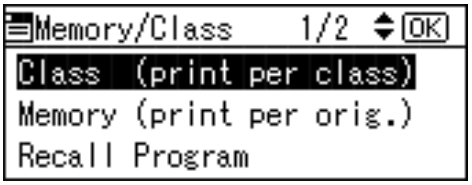
Recalling the Stored Settings

1 **Set your original.**

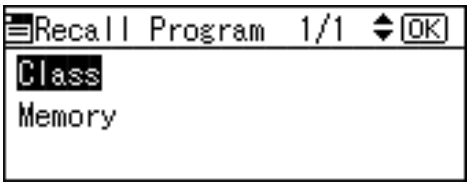
2 **Press the [Memory/Class] key.**



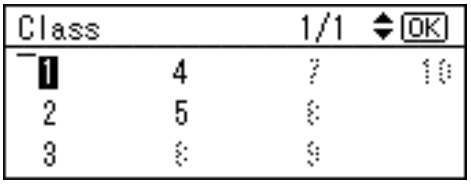
3 **Use the [▲][▼] keys to select Recall Program, and then press the [OK] key.**



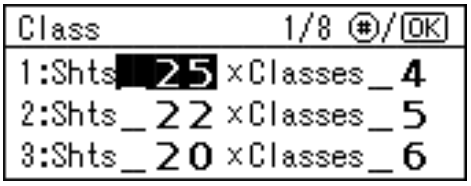
4 **Use the [▲][▼] keys to select Class or Memory, and then press the [OK] key.**



5 **Use the [▲][▼] keys to select the number to recall, and then press the [OK] key.**



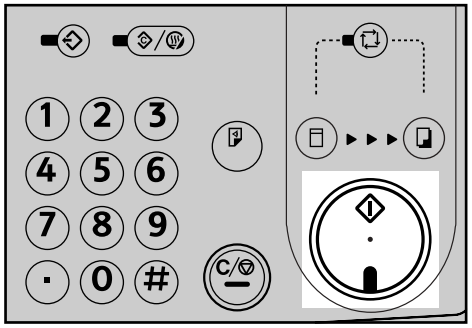
6 **Confirm that the settings are correct, and then press the [OK] key.**



Note

❒ To change the stored settings, use the [▲][▼] keys to select the item that you wish to change, and then overwrite using the number keys.

7 **Press the [Start] key.**



Class/Year

Preparation

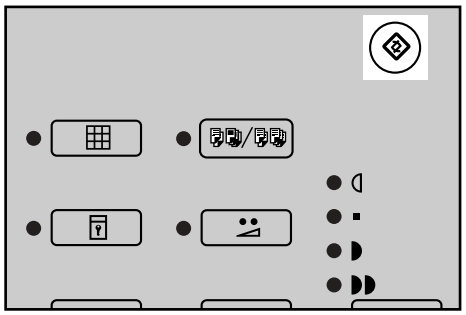
To use this mode, you need to first register the number of prints required for each class.

Registering Class/Year

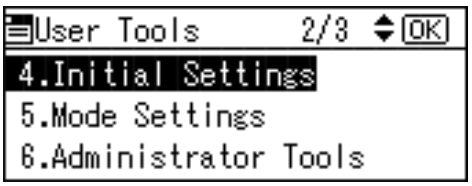
Note

❒ You can register for up to 108 classes (up to 12 classes per school year for a maximum of 9 school years).

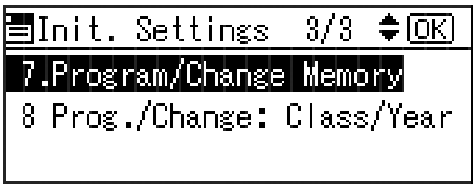
1 **Press the【User Tools】key.**



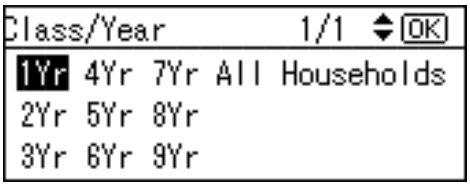
2 **Use the【▲】【▼】keys to select 4 Initial Settings, and then press the【OK】key.**



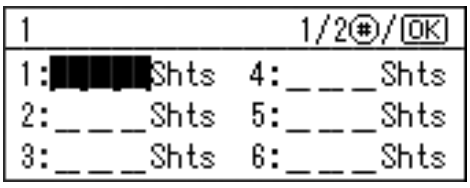
3 **Use the【▲】【▼】keys to select 8 Prog./Change:Class/Year, and then press the【OK】key.**



4 **Use the【▲】【▼】keys to select the desired school year, and then press the【OK】key.**



5 **With the number keys, enter the number of prints for a class, and then press the【#】key.**



Note

❒ Repeat Steps **4** and **5** to register all your classes.

6 **Press the【OK】key.**

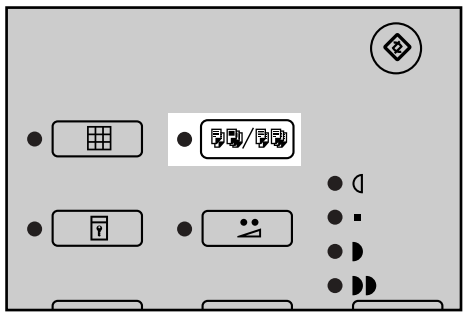
7 **Press the【Clear Modes/Energy Saver】key.**

The contents that you have registered are now effective.

Printing for All Years

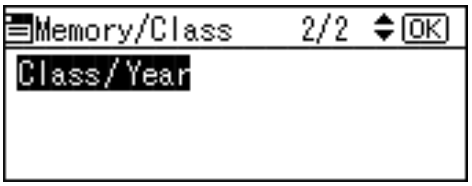
1 **Set your original.**

2 **Press the【Memory/Class】key.**

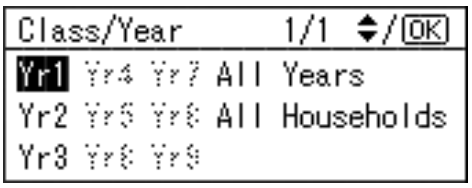


3

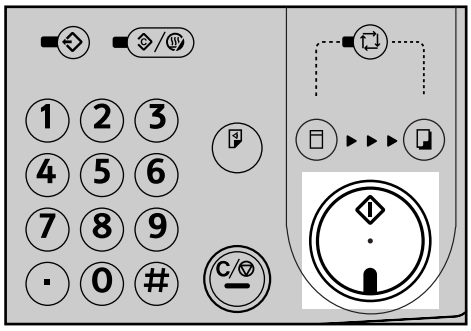
3 Use the [▲][▼] keys to select Class/Year, and then press the [OK] key.



4 Use the [▲][▼] keys to select All, and then press the [OK] key.



5 Press the [Start] key.



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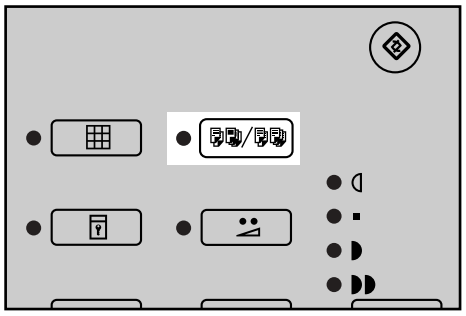
Printing for Selected Classes

1 Set your original.

2 Press the [Memory/Class] key.



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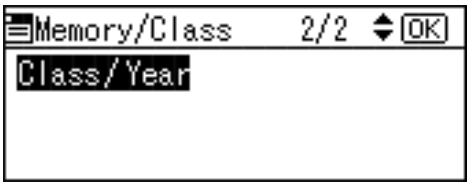
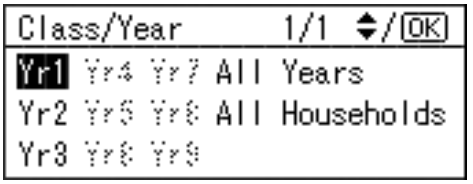
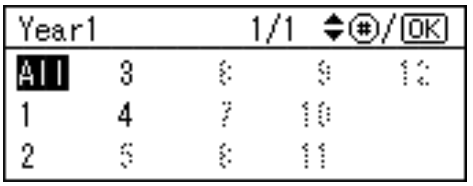
3 Use the [▲][▼] keys to select Class/Year, and then press the [OK] key.



4 Use the [▲][▼] keys to select the school year, and then press the [OK] key.



5 Use the [▲][▼] keys to select the class that you wish to print for, and then press the [#] key.

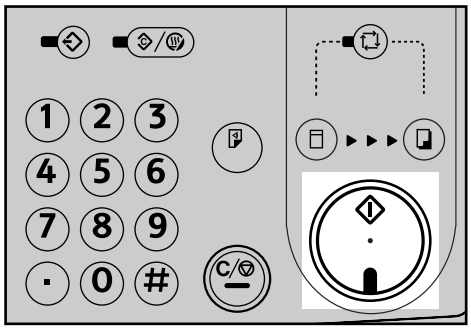


Note

- ❒ Repeat Step 5 to select more classes.
- ❒ You can only select classes from the same school year.
- ❒ If you have selected the wrong class, indicate it again using the [▲][▼] keys, and then press the [#] key to cancel its selection.

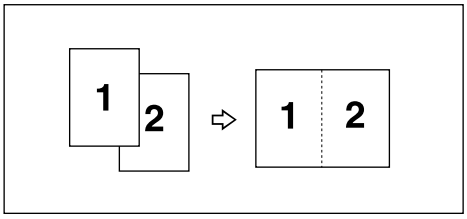
6 Press the [OK] key.

7 **Press the [Start] key.**



Combine

Use this function to combine two originals onto one sheet of paper.



Note

❒ When the two originals are combined, their sizes would be reduced or enlarged as follows:

❖ **Metric version**

		Original Size		
		A4	B5	A5
Paper Size	B4	87%	100%	122%
	A4	71%	82%	100%

❖ **Inch version**

		Original Size	
		$8^1/_2$" × 11"	$5^1/_2$" × $8^1/_2$"
Paper Size	$8^1/_2$" × 14"	65%	100%
	$8^1/_2$" × 11"	65%	100%

❒ If the length of the first original is shorter than 91mm, 3.6" , Combine mode will be disabled.

❒ You can set the machine to automatically cancel Combine/Repeat mode once you have finished using it. See "Cancel Combine Setting" on p.107 "5 Mode Settings".

❒ Any image closer than 5mm, 0.2" to the leading edge of the first original will not be printed. Also, any image closer than 4mm, 0.16" to the leading edge of the second original will not be printed. When the image is too close to the leading edge, make duplicates of the originals with the image shifted away from the leading edge, and then print from the duplicates.

❒ You can select different image settings for the first and second originals.

❒ Make sure that the paper feed side plates touch the paper lightly. If they do not, then the two images will not be properly aligned on the prints.

Reference

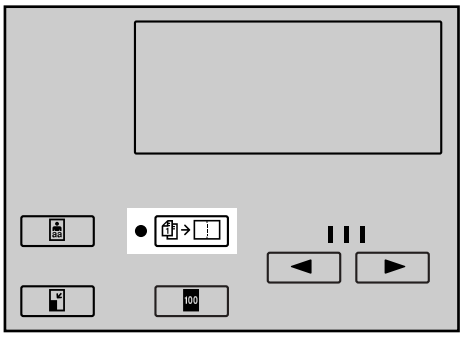
For details on how to use the optional Auto Document Feeder when combining originals, see p.56 "Using the Auto Document Feeder when Combining Originals".

1 **Place the first original face down on the exposure glass.**

Note

❒ When combining originals, place the original face down on the exposure glass with its leading edge towards you, as shown above.

2 Press the【Combine/Repeat】key.



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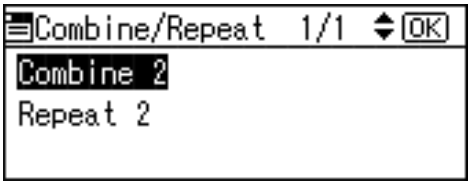
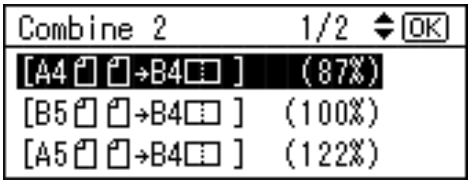
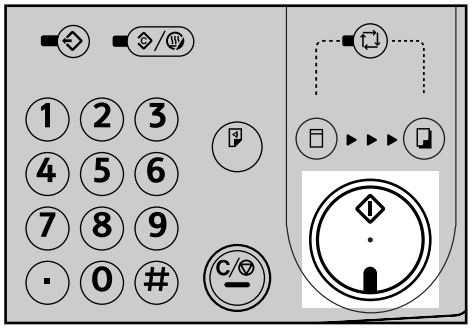
3 Use the【▲】【▼】keys to select Combine 2, and then press the【OK】key.



4 Use the【▲】【▼】keys to select original and paper size, and then press the【OK】key.



5 Press the【Start】key.



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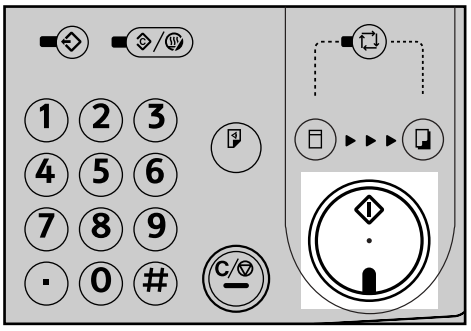
6 After the first original has been scanned, place the second original in the same way.

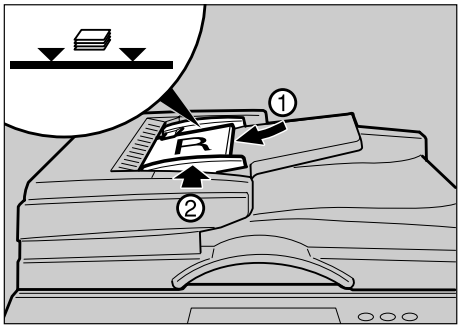
7 Press the【Start】key.



ANT015S

Using the Auto Document Feeder when Combining Originals

1 Place the originals face up in the Auto Document Feeder.

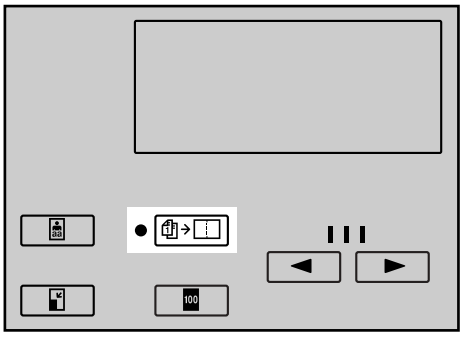


AJK153S

Note

❒ The first (top) original will be printed on the left side of the print.

2 Press the【Combine/Repeat】key.



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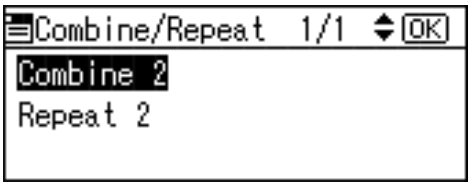
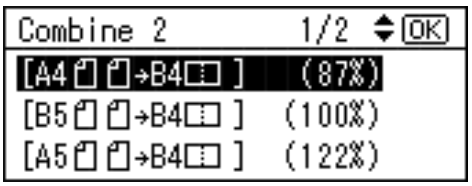
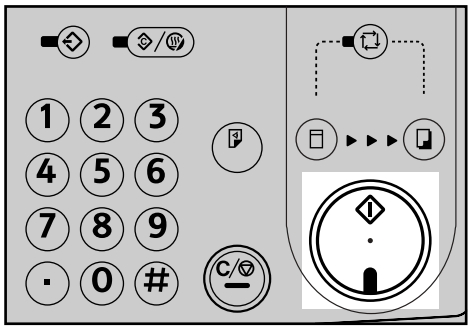
3 **Use the [▲][▼] keys to select Combine 2, and then press the [OK] key.**



4 **Use the [▲][▼] keys to select original and paper size, and then press the [OK] key.**



5 **Press the [Start] key.**

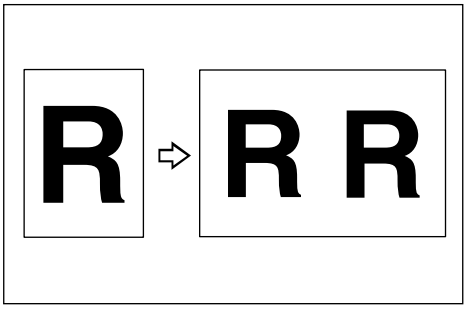


Note

❒ After the first original has been stored, the second original is fed.

Repeat

Use this function to repeat the image twice on the same sheet of paper.



Limitation

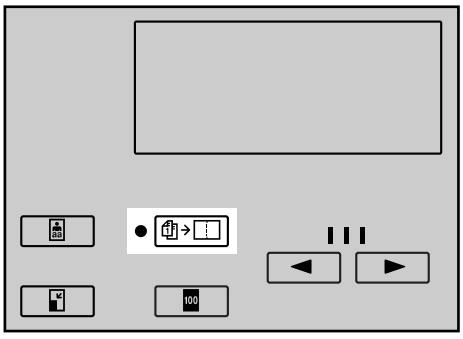
❒ You cannot use the optional Auto Document Feeder with the Repeat function.

Note

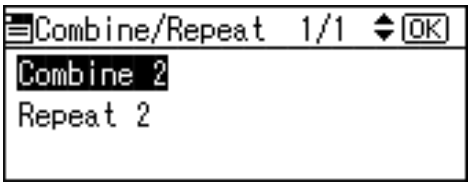
❒ You can choose to have either Combine or Repeat selected by default when the power is turned on. See "Combine/Repeat Priority" on p.107 "5 Mode Settings".

1 **Set your original.**

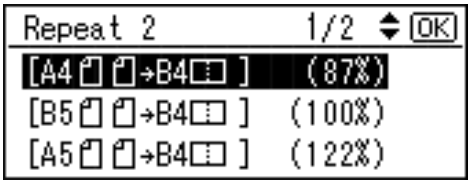
2 **Press the [Combine/Repeat] key.**



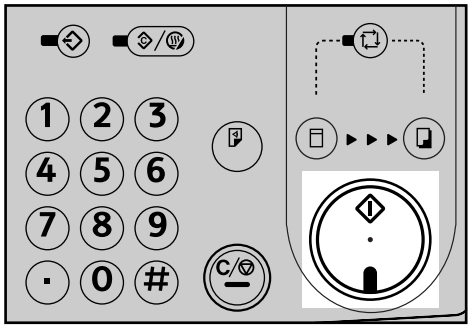
3 Use the [▲][▼]keys to select Repeat 2, and then press the [OK] key.



4 Use the [▲][▼] keys to select original and paper size, and then press the [OK] key.



5 Press the [Start] key.



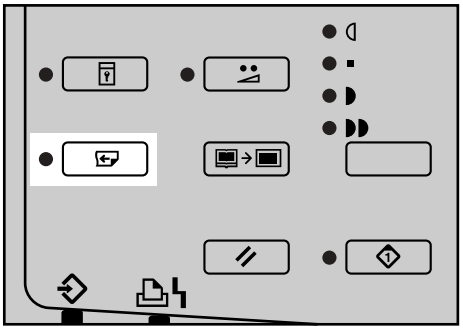
Skip Feed Printing

If the backs of prints are dirty, you can use the [Skip Feed] key to make the drum rotate twice instead of once with every sheet of paper fed. This gives you time to remove prints one by one from the paper delivery tray, or to insert a sheet of paper between two prints.

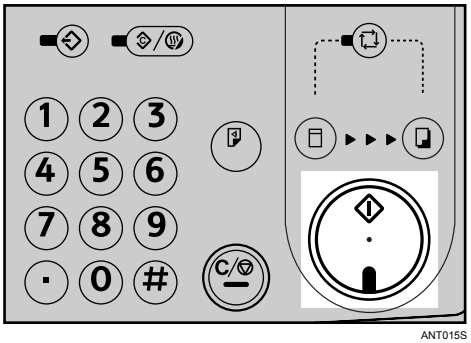
Note

- ❒ You can specify how many times that the drum rotates when the power is turned on. Alternatively, you can also choose whether or not to change the number of rotations temporarily when the [Skip Feed] key is pressed. See "Skip Feed" on p.107 "5 Mode Settings".
- ❒ The number of rotations can be set from 2 to 9.
- ❒ The default is 2.

1 Press the [Skip Feed] key.



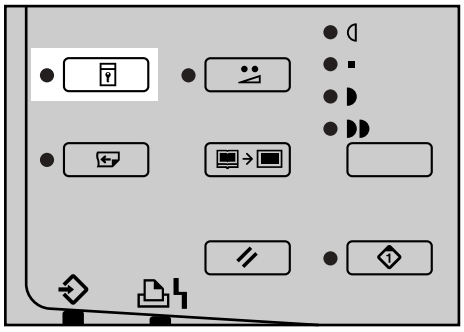
2 Press the [Start] key.



Security Mode

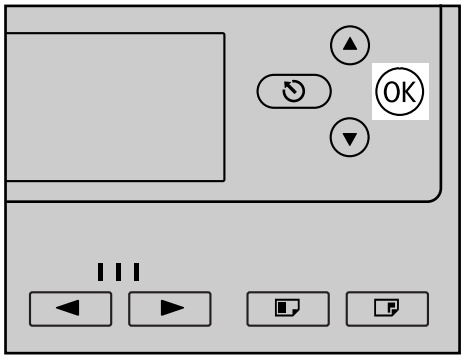
Use this function to prevent others from accessing your masters and making prints of confidential documents after you have done so.

1 **After you have made your prints, press the【Security】key.**



ANT028S

2 **Press the【OK】key.**



ANT022S

Note

❒ Once Security mode is set, you will not be able to press the【Proof】key or the【Start】key, nor will you be able to pull out the drum unit.

❒ Security mode cannot be cleared by turning off the main switch.

❒ Security mode will be cancelled when you set a new original and press the【Start】key.

Online Printing

Online printing allows you to use this machine as a PC printer.

Limitation

❒ The optional PC controller is required.

Reference

For dedails about online printing, refer to the manual for the PC controller.

Hold Data-in

You can select whether or not the machine automatically switches to Online mode when it receives data from a PC.

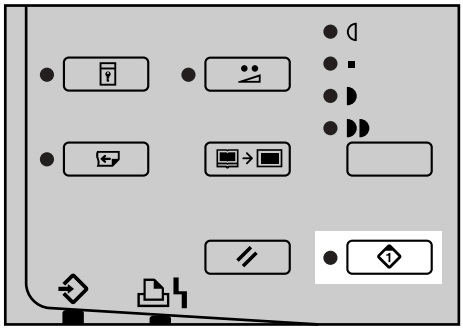
Press the【Hold Data-in】key to switch it on or off.

When the Hold Data-in mode is off, the machine gives priority to data received from a PC. If you are making prints and do not wish to have your print job interrupted by a PC, press the【Hold Data-in】key to turn it on.

Note

❒ The default is Off.

1 **Press the【Hold Data-in】key.**



ANT034S

Program

Use this function to store up to nine frequently used print job settings and to recall them for future use.

Note

❒ The stored contents will not be cleared even when you turn off the main switch.

❒ The stored contents cannot be deleted. To change the contents of a program, overwrite it with new print settings.

❒ You can store settings for the following functions:

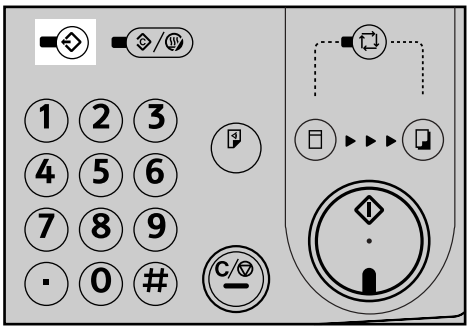
- Type of Original
- Image Density
- Image Position
- Printing Speed
- Fine mode
- Preset Reduce/Enlarge
- Edge Erase
- Economy Mode
- Memory/Class
- Combine/Repeat
- Skip Feed
- Hold Data-in

❒ You cannot store settings for Security mode, nor for the Program function itself.

Registering Print Settings

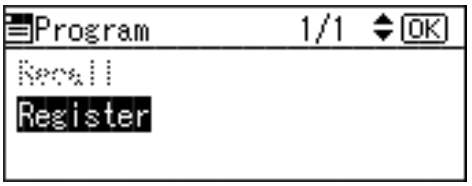
1 **First specify the print settings that you wish to store.**

2 **Press the 【Program】 key.**

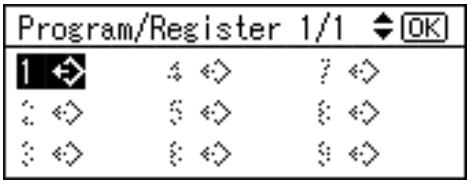


ANT006S

3 **Use the 【▲】【▼】 keys to select Register, and then press the 【OK】 key.**



4 **Use the 【▲】【▼】 keys to select a number.**



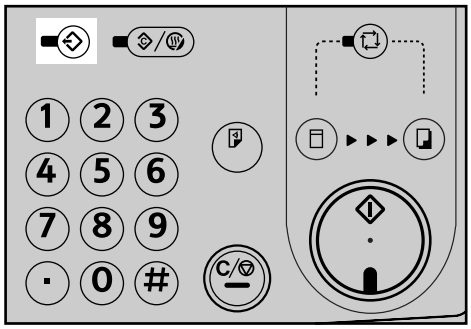
Note

❒ If the number is already in use, a message will be displayed asking whether you wish to overwrite the settings stored. To overwrite, press the 【OK】 key. Otherwise press the 【Escape】 key to return to the previous display, and then select another number.

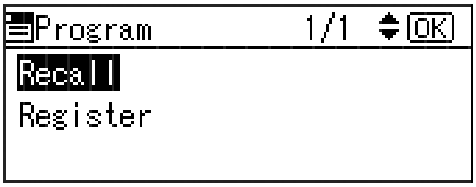
5 **Press the 【OK】 key.**

Recalling a Program

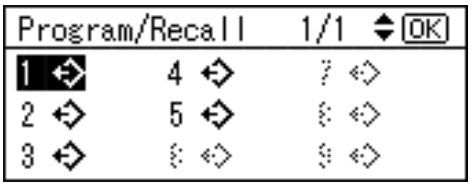
1 **Press the【Program】key.**



2 **Use the【▲】【▼】keys to select Recall, and then press the【OK】key.**



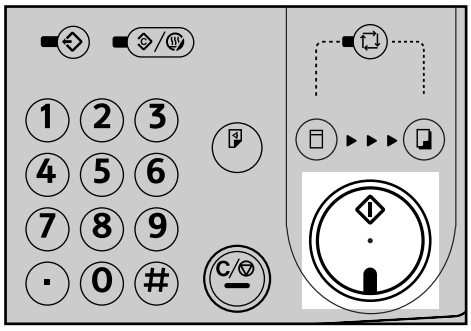
3 **Use the【▲】【▼】keys to select the number to recall, and then press the【OK】key.**



The stored settings are displayed.

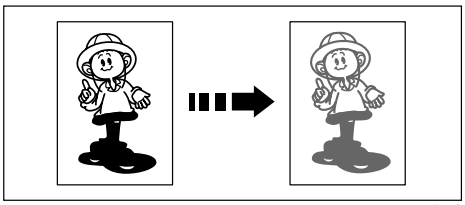
4 **Confirm that the settings are correct, and then set your original.**

5 **Press the【Start】key.**



Make Colour Prints

Colour drum units (red, blue, green, brown, yellow, purple, navy, maroon, orange, teal and gray) are available as options in addition to the standard black unit. For making colour prints, a separate drum unit is necessary for each colour.



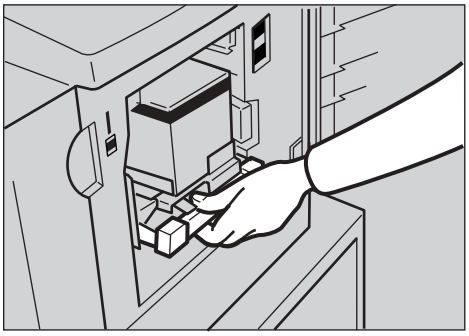
ANT114S

Changing the Colour Drum Unit

1 **Open the front cover.**

ANT057S

2 **Pull out the drum unit handle.**

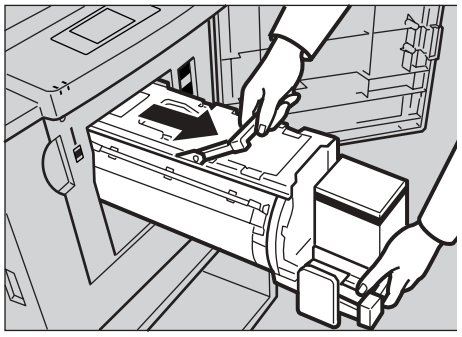


ANT052S

Note

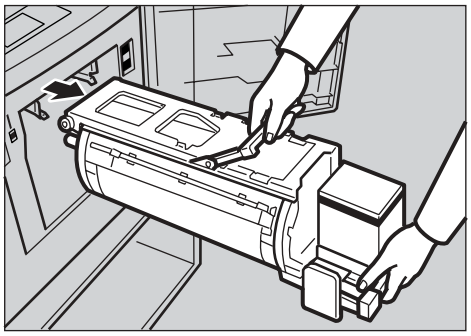
❒ If you cannot pull out the drum unit, push the drum unit handle, then pull out the drum unit.

3 **Hold the rail on the drum and slide out the drum while pulling the release towards you.**



ANT047

4 **Remove the drum unit from the machine while holding the upper drum stay.**

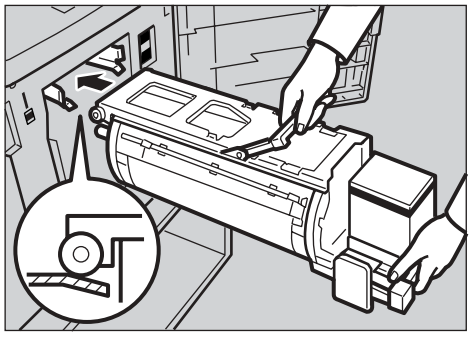


ANT048S

Note

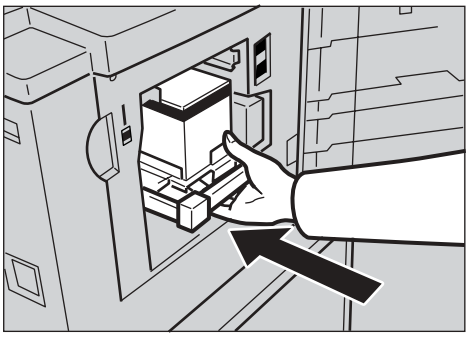
❒ Be careful not to let the drum unit fall.

5 **Insert the colour drum unit along the guide rail.**



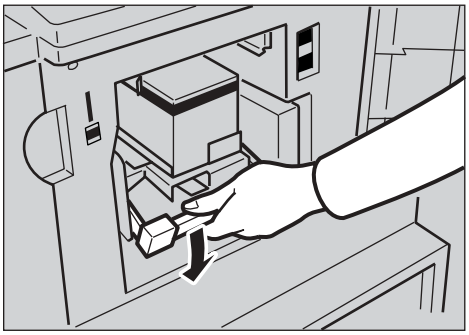
ANT053S

6 **Slide in the drum unit until it locks in position.**



ANT049S

7 **Lower the drum unit lock lever.**



ANT115S

8 **Close the front cover.**

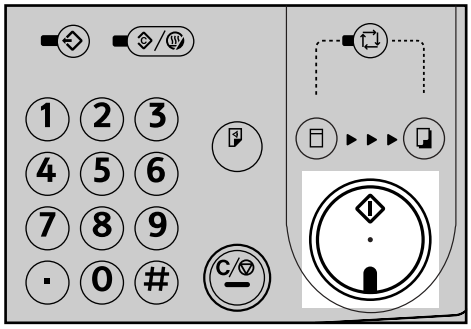
ANT059S

Note

❒ Make sure that the **Cover Open** indicator ( ) turns off, and the **Color** indicator is lit.

Making Colour Prints

1. **Make sure that the Color indicator is lit.**
2. **Set your original.**
3. **Press the【Start】key.**



ANT015S

Printing in Two Colours

After printing in one colour, you can print in another colour on the same side of the print.

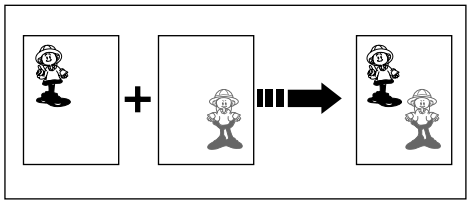
Important

- ❒ Leave the prints for a while before printing on them again to let the ink dry.
- ❒ If the prints are not dry, the paper feed roller might become dirty. In this case, wipe off the roller with a cloth.

Note

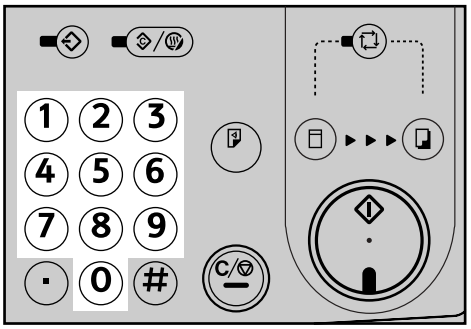
- ❒ You cannot print in two colours at a time.

1. **Prepare two originals. Set the first original on the exposure glass.**



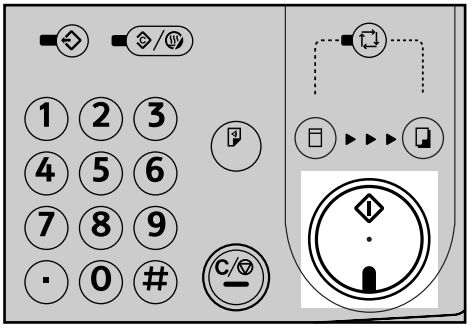
ANT113S

2. **Enter the number of prints with the number keys.**



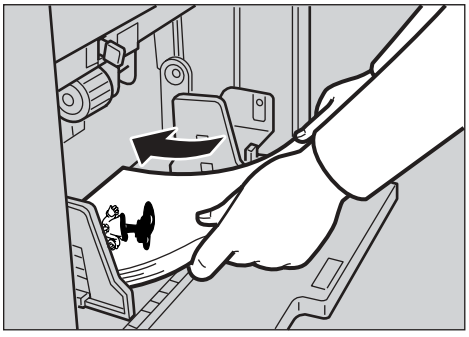
ANT008S

3. **Press the【Start】key.**



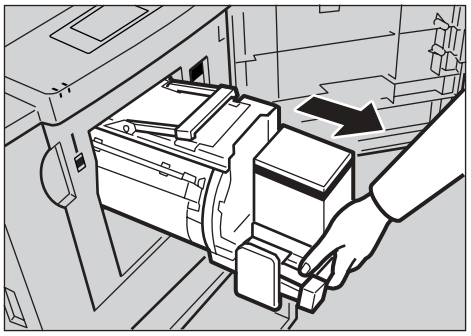
ANT015S

4. **Remove the prints from the paper delivery tray and set them on the paper feed tray again as shown in the illustration.**



ANT079S

5 **Exchange the drum unit. See ⇒ p.62 “Changing the Colour Drum Unit”.**



ANT054S

6 **Set the second original and press the【Start】key.**

Combination Chart

This combination chart shows which modes can be used together.

Blank	means that these modes can be used together.
×	means that these modes cannot be used together.

		Function chosen later											
		Master Making Density	**Original Type**	**Fine mode**	**Economy mode**	**Auto Cycle**	**Preset Reduce/Enlarge**	**Combine**	**Repeat**	**Erase Border**	**Memory/Class**	**Skip Feed**	**On Line**
Function selected first	Master Making Density	--											×
	Original Type		--										×
	Fine mode			--									×
	Economy mode				--								
	Auto Cycle					--							
	Preset Reduce/Enlarge						--						×
	Combine							--	×				×
	Repeat							×	--				×
	Erase Border									--			×
	Memory/Class										--		×
	Skip Feed											--	
	On Line	×	×	×			×	×	×	×	×		--

If Your Machine Does Not Operate as You Want

The following chart gives explanations of common problems and messages. If other messages appear, follow the instructions displayed. If a malfunction or a misfeed occurs, the following messages will appear on the display.

❖ When a Message is Displayed

Message	Causes	Solutions
`Set original.`	You have not changed the original on the exposure glass before pressing the【Start】key.	Place the next original on the exposure glass or in the ADF.
	Original is not placed.	Place your originals.
`Set the Drum Unit correctly.`	The drum unit is not set correctly.	Slide in the drum until it clicks. Make sure that the drum is completely set in position.
`Set the Master Eject Box correctly.`	The master eject box is not set correctly.	Make sure that the master eject box is completely set in position.
`Auto-shutdown occurred due to power problems. Press OK to exit.`	The power problem is occurred.	Press【OK】key. If it occurs frequently, contact your customer service.

Printing Problems

Problem	Cause	Action
When you try to select several functions at the same time, some of them cannot be selected.	Some functions cannot be used together.	See p.66 "Combination Chart".
Parts of the image are not printed in Edge Erase mode.	The edge erase margin that you set is too wide.	Adjust the edge erase margin with the user tools. See "Erase Border Width" on p.106 "4 Initial Settings".
	The original has very narrow margins.	
Prints are blank, or parts of the image are not printed.	The paper feed side plates are not set correctly.	Make sure that the paper feed side plates touch the paper lightly.
Printing in a second colour is unsatisfactory.	The first colour is still wet.	Wait until the first colour becomes dry.
An uneven solid image appears.	Large solid image wrinkles the master.	Increase the printing speed or use Photo mode.

Printing Problems When Using Combine Mode

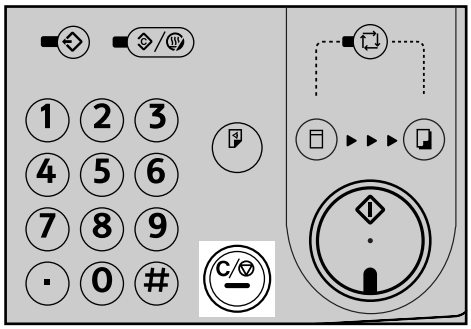
Problem	Cause	Action
Prints are blank or parts of the image are not printed.	Original size and orientation are not correct.	You cannot combine originals of different sizes and orientations
The image is not printed correctly.	The originals were fed in the wrong order.	When using the optional Auto Document Feeder, place the originals face up. The first original should be on the top.
		When using the exposure glass, place the originals face down on the exposure glass. The first original should be placed first.

Loading Paper into the Paper Feed Tray

The **Load Paper** indicator (🖹) lights when the paper feed tray runs out of paper.

Replenishing Paper

1 **Press the【Clear/Stop】key.**

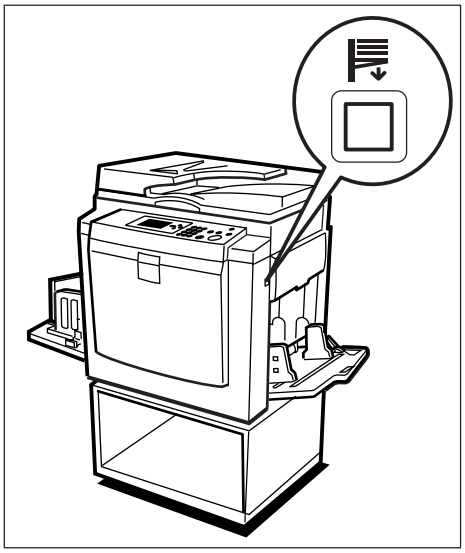


ANT011S

Note

❒ This step is necessary only if you want to pause a print run to replenish paper.

2 **Press the【Paper Feed Tray Down】key.**



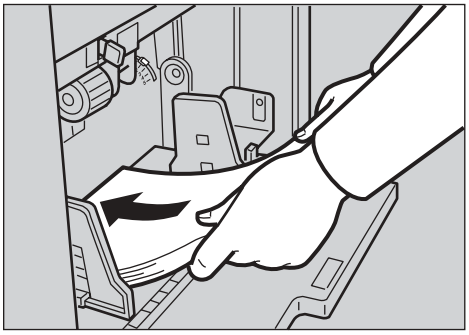
ANT045S

Note

❒ The paper feed tray will lower without the key being pressed when the printing paper runs out.

❒ The top sheet might remain between the feed rollers. In this case, remove the top sheet.

3 **Load paper into the paper feed tray.**

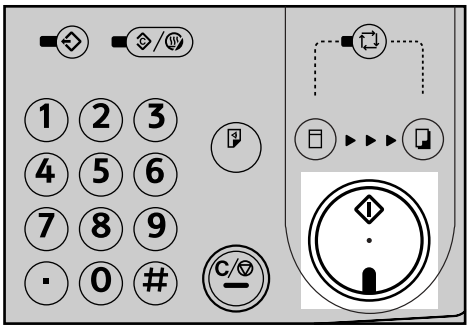


ANT074S

Note

❒ Correct paper curl before setting the paper.

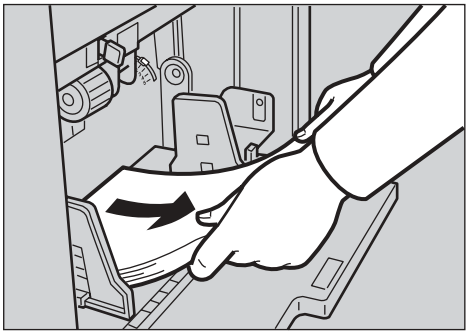
4 **Press the【Start】key to resume printing.**



ANT015S

Changing the Paper Size

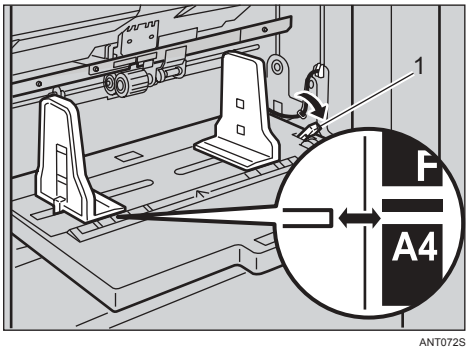
1 **Remove the paper from the paper feed tray.**



ANT073S

The paper feed tray will lower.

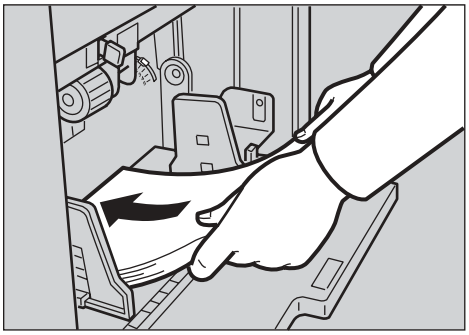
2 **Shift the paper feed side plates lock lever forward. Adjust the paper feed side plates to match the paper size.**



ANT072S

1: Paper Feed Side Plates Lock Lever

3 **Load paper into the paper feed tray.**

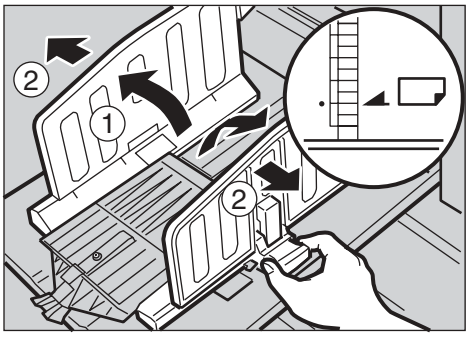


ANT074S

Note

- ❒ Correct any paper curl before setting the paper.
- ❒ Make sure that the side plates touch the paper lightly.
- ❒ Shift the lock lever to its original position.

4 **Adjust the side plates and the end plate.**



ANT062S

When the Add Ink Indicator (🖋) Lights

The **Add Ink** indicator (🖋) lights when it is time to supply ink.

⚠ ***CAUTION:***

- *Keep the ink or ink container out of reach of children.*

⚠ ***CAUTION:***

- *Be careful not to get ink on your clothes when replacing an ink container. Ink stains on clothes are hard to remove.*

⚠ ***CAUTION:***

- *When disposing of a used ink container, reattach the cap to prevent ink from splattering.*

⚠ ***CAUTION:***

- *If your skin comes into contact with ink, wash the affected area thoroughly with soap and water.*

⚠ ***CAUTION:***

- *If ink comes into contact with your eyes, rinse immediately in running water. For other symptoms, consult a doctor.*

⚠ ***CAUTION:***

- *If ink is ingested, induce vomiting by drinking a strong saline solution. Consult a doctor immediately.*

Important

❒ Faults may occur if you use ink other than the recommended type.

❒ Our products are engineered to meet high standards of quality and functionality, and we recommend that you use only the expendable supplies available at an authorized dealer.

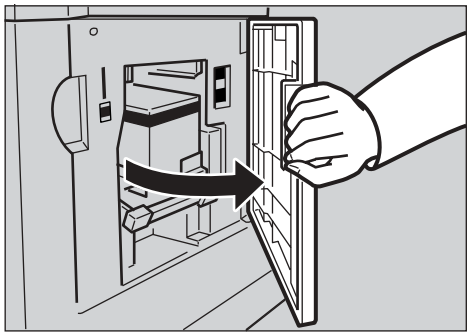
Note

❒ Be sure to supply ink of the same colour as the current drum.

❒ Store ink in a cool, dry place. Do not store ink where it will be exposed to heat or direct sunlight.

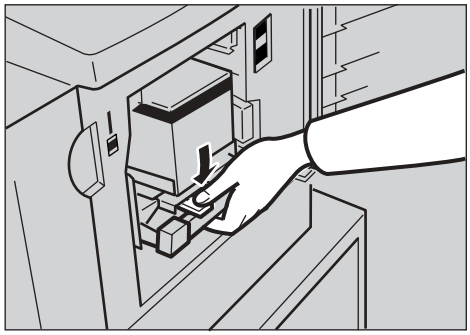
❒ Store ink on a flat surface.

1 **Open the front cover.**



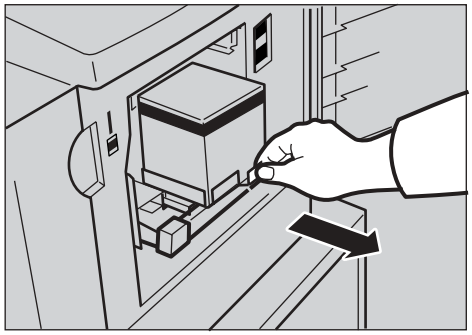
ANT057S

2 **Push the ink holder lever.**



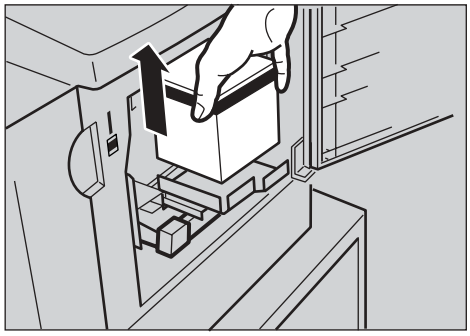
ANT060S

3 **Pull out the ink holder.**



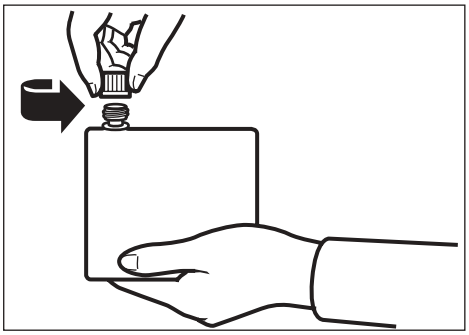
ANT089S

4 **Remove the used ink cartridge.**



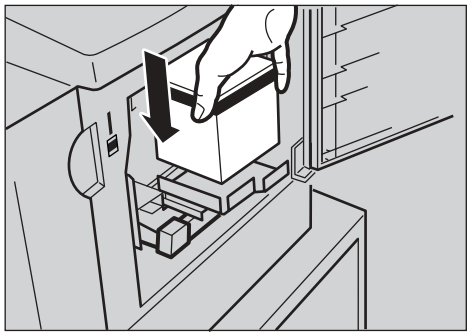
ANT091S

5 **Remove the cap of the new ink cartridge.**



ANT098S

6 **Insert the new cartridge into the ink holder.**

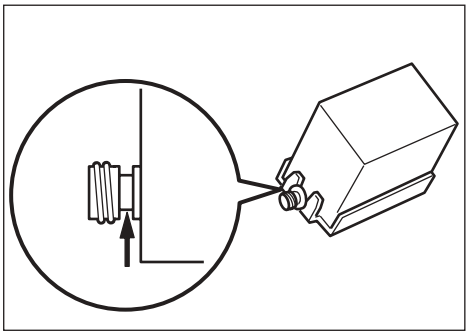


ANT092S

Note

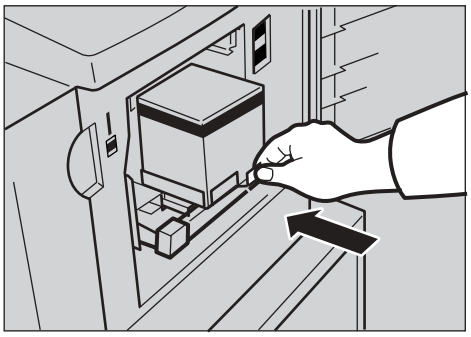
❒ Always supply ink of the same colour.

❒ Make sure to firmly insert the part indicated by the arrow mark into the guide.



ANT097S

7 **Return the ink holder to its original position until it clicks.**



ANT090S

8 **Close the front cover.**

ANT059S

The machine will start idling to supply ink to the drum.

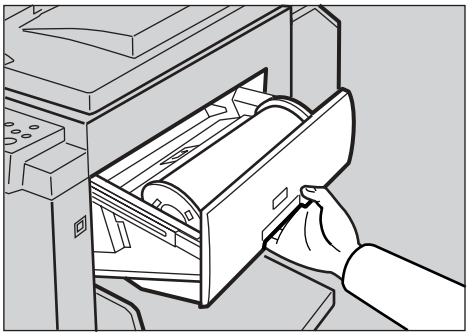
Note

❒ It will stop when the correct amount of ink reaches the drum.

Master Roll Replacement

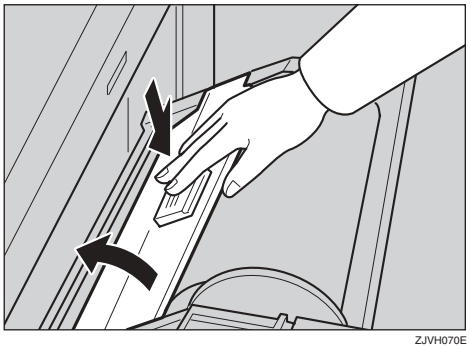
The **Master End** indicator (🖨) is lit when it is time to replace the master roll.

1 **Pull out the master tray.**



ANT065S

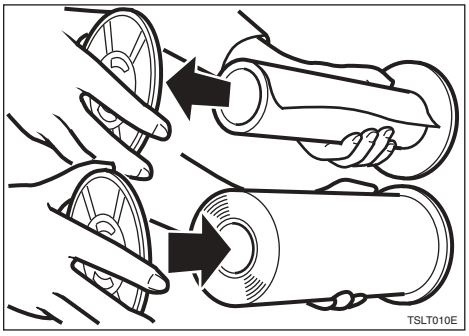
2 **Press the release button to open the master feeding cover.**



ZJVH070E

3 **Unwrap the tape from the new master roll.**

4 **Remove the used master roll and pull out both spools. Then, insert both spools into a new master roll.**

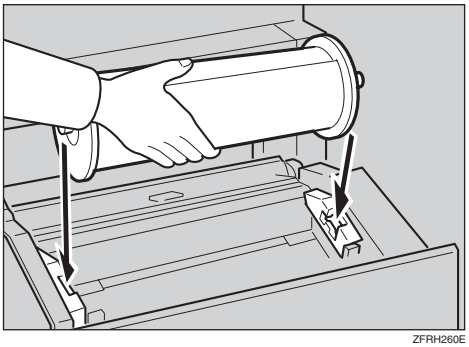


TSLT010E

Note

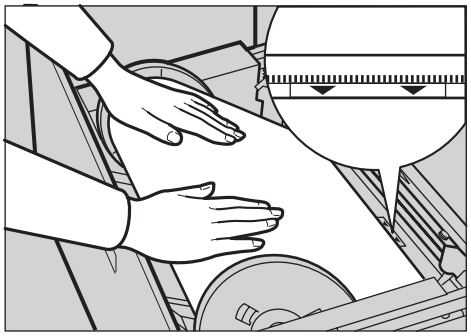
❒ It is necessary to replace the master roll even if some master remains on the old roll.

5 **Set the new master roll in the master tray.**



ZFRH260E

6 **Insert the master and set its leading edge to the position of the marks.**

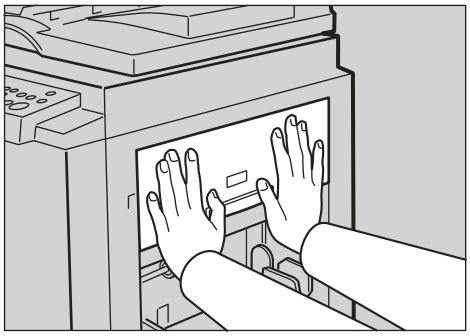


ANT080S

7 **Close the master feeding cover firmly.**

ZFRH250E

8 **Close the master tray.**



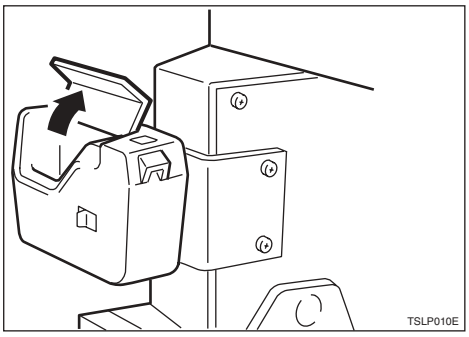
ANT066S

Placing a New Roll of Tape in the Tape Dispenser (Option)

Note

❒ Make sure that the main switch is turned on and the power switch of the tape dispenser is off.

1 **Open the cover of the tape dispenser.**

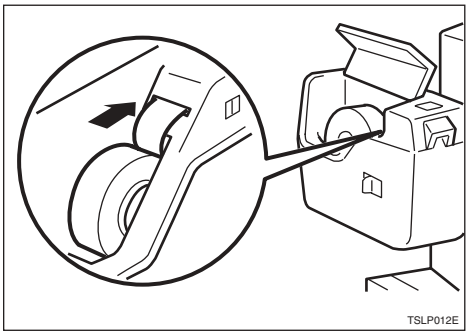


2 **As shown, put the roll in the dispenser.**

Note

❒ Make sure that the tape is installed in the proper direction. If it is not in the correct direction, the tape dispenser will not work correctly.

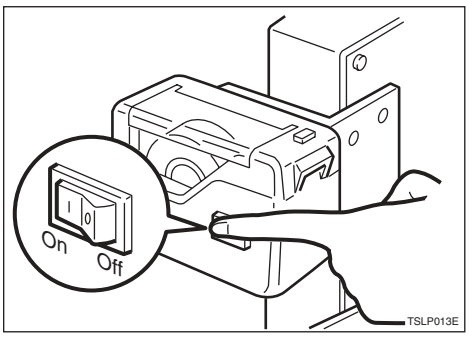
3 **Feed the leading edge of the roll in the dispensing slot until it stops.**



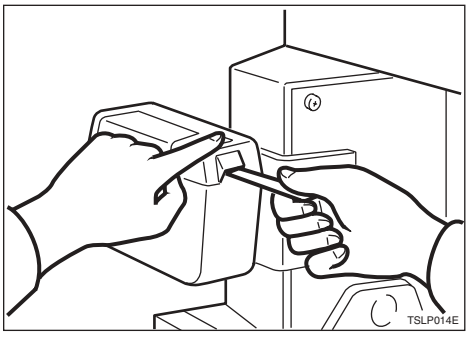
Note

❒ Push the tape as far as possible through the slot.

4 **Turn on the power switch of the tape dispenser.**



5 **Press the manual cut button to trim off the leading edge of the tape.**



Clearing Misfeeds

The location indicators show where the jam has occurred.

Important

❒ When clearing misfeeds, do not turn off the main switch. Otherwise, your print settings are cleared.

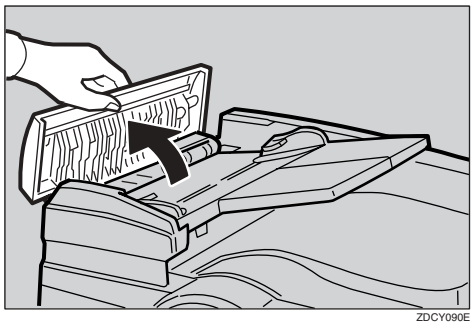
"+ P" Original Misfeeds Occur in the Auto Document Feeder

An original misfeed has occurred in the optional Auto Document Feeder.

Note

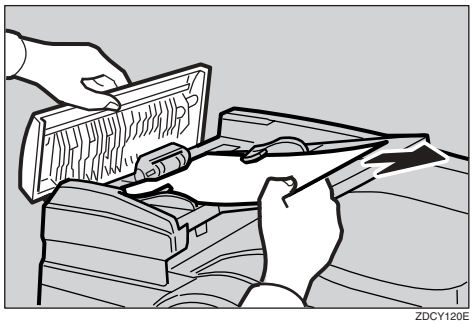
❒ This indicator will only be displayed when the machine is equipped with the optional Auto Document Feeder.

1 **Open the Auto Document Feeder cover.**



ZDCY090E

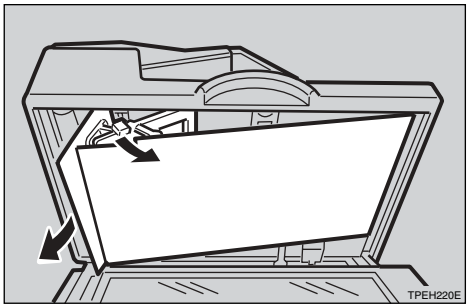
2 **Pull out the original gently.**



ZDCY120E

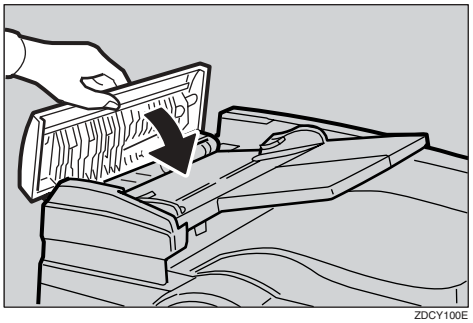
3 **If you are unable to remove the misfed original in Step 2, lift the Auto Document Feeder.**

4 **Pull the green knob towards you to remove the original.**



5 **Return the document feed sheet to its original position.**

6 **Close the Auto Document Feeder cover until it clicks in position.**



To prevent original misfeeds

Use the exposure glass for the following kinds of originals.

- Originals heavier than 128g/m^2, 34 lb
- Originals lighter than 52g/m^2, 14 lb
- Originals smaller than 148mm × 210mm, 5.9" × 8.3"
- Originals larger than 297mm × 864mm, 11.6" × 34.0"
- Stapled or clipped originals
- Perforated or torn originals
- Curled, folded, or creased originals
- Originals with any kind of coating, such as thermal fax paper, art paper, aluminum foil, carbon paper, or conductive paper
- Bound originals such as books
- Damaged originals
- Originals with glue on them
- Pasted originals
- Originals written in pencil
- Thin and flimsy originals

- Originals with index tabs
- Transparent originals such as OHP transparencies or translucent paper

Note

❒ You cannot place originals of different sizes at the same time.

❒ Remove staples or clips from the originals, and then fan the originals lightly.

❒ Do not stack originals above the limit mark.

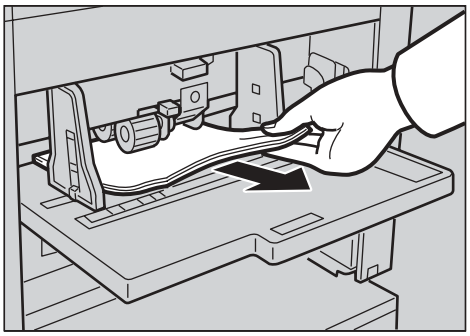
"⚠ + A" Paper Misfeeds in the Paper Feed Section

A paper misfeed has occurred in the paper feed section.

⚠ ***CAUTION:***

- *Be careful not to cut yourself on any sharp edges when you reach inside the machine to remove misfed sheets of paper or masters.*

1 Slowly but firmly pull out the paper.



ZFRY010E

2 If the indicators remain lit, open the front cover and close it firmly or press 【OK】 key.

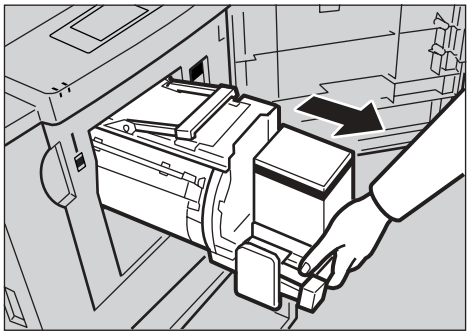
Reference

See p.84 "To prevent paper misfeeds".

"+ B" Paper Wrapped Around the Drum

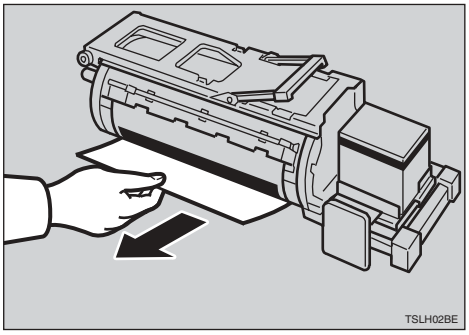
The paper is wrapped around the drum.

1 **Pull out the drum unit.**



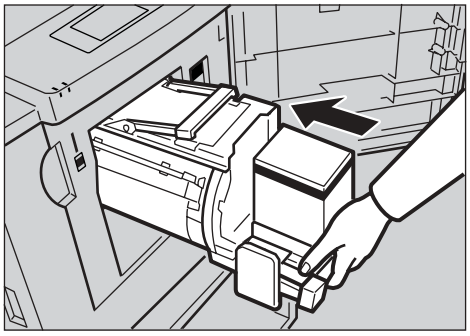
ANT054S

2 **Remove the misfed paper.**



TSLH02BE

3 **Insert the drum unit until it locks in position, and then lower the drum unit lock lever.**



ANT061S

4 **Close the front cover.**

ANT059S

Reference

See p.84 “To prevent paper misfeeds”.

“ + C” Paper Misfeeds in the Paper Exit Section

A paper misfeed has occurred in the paper exit section.

⚠ ***CAUTION:***

- *Be careful not to cut yourself on any sharp edges when you reach inside the machine to remove misfed sheets of paper or masters.*

1 **Remove the misfed paper.**

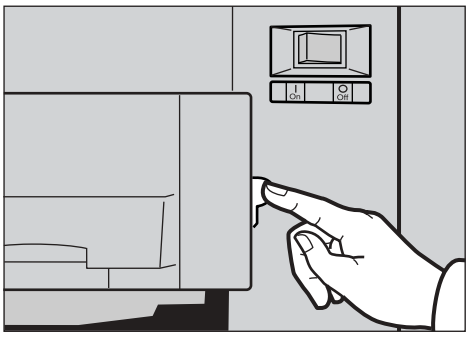
ANT094S

Note

❒ Make sure that the paper delivery end plate and side plates are at their correct positions.

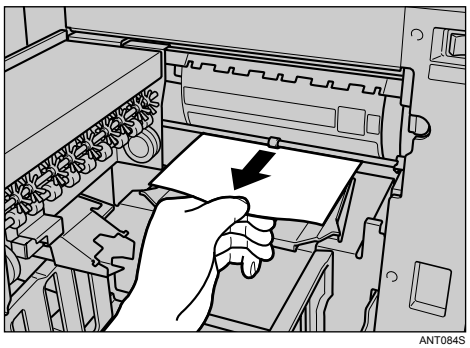
❒ If a jam occurs because the current printing speed is too fast, reduce the speed.

2 **If you can not see the misfed paper, push the button and open the master eject unit.**



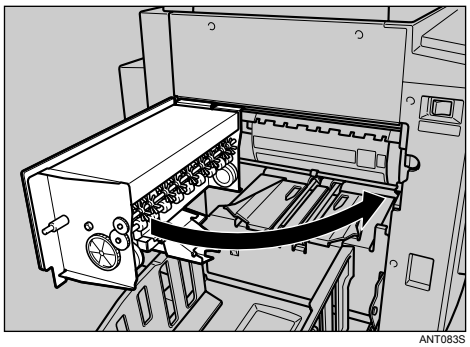
ANT081S

3 **Remove the misfed paper.**



ANT084S

4 **Close the master eject unit.**



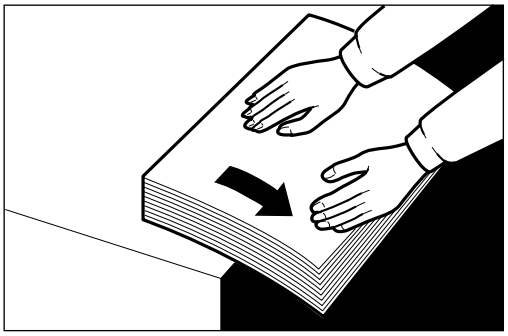
ANT083S

5 **If the indicators remain lit, open the front cover and close it firmly or press 【OK】 key.**

To prevent paper misfeeds

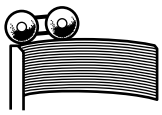
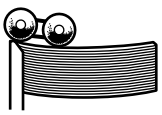
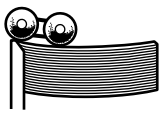
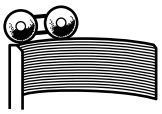
If paper is curled or the margin on the leading edge of the original is too narrow, the following action is necessary.

- Before using the paper, correct the curl as shown below.



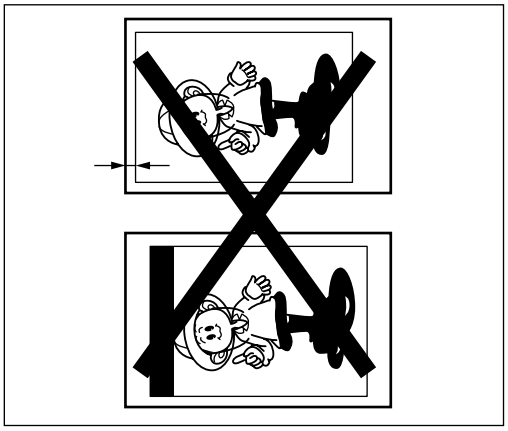
GRCURL0E

- If you are unable to correct the paper curl, place the paper in the paper feed tray with it curling either upward or downward, as shown in the illustration below.

	Right	Wrong
Thin Paper		
Thick Paper		

TPEY990E

- When the leading edge margin of the original is less than 5mm, 0.2" , or when there is a solid image on the leading edge, feed the original from the edge with the widest margin. Alternately, create a leading edge margin on a duplicate of the original, and then print from the duplicate.

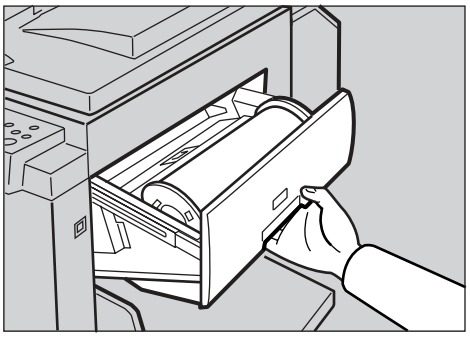


GRLEAD0E

"+ D" Master Misfeeds in the Master Feed Section

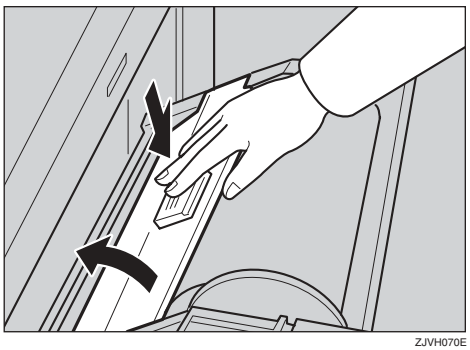
A master misfeed has occurred in the master feed section.

1 Pull out the master tray.



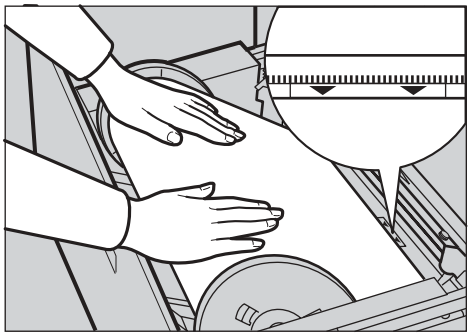
ANT065S

2 Open the master feeding cover, and then remove the misfed master inside.



ZJVH070E

3 **Set the leading edge of master to the position of the marks.**

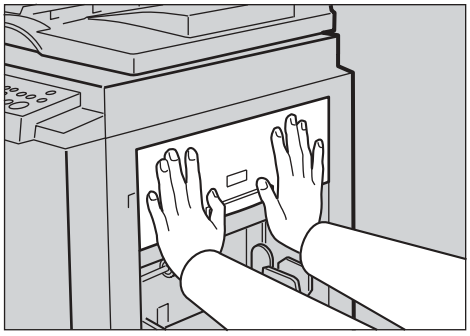


ANT080S

4 **Close the master feeding cover firmly.**

ZFRH250E

5 **Close the master tray.**

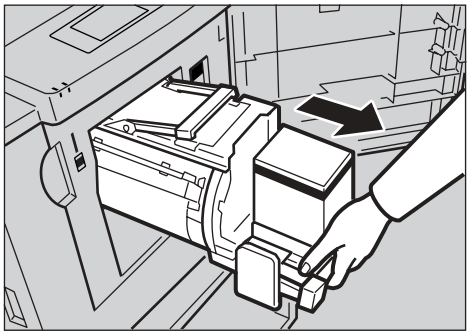


ANT066S

"+ A + B" Paper Misfeeds in the Paper Feed Section

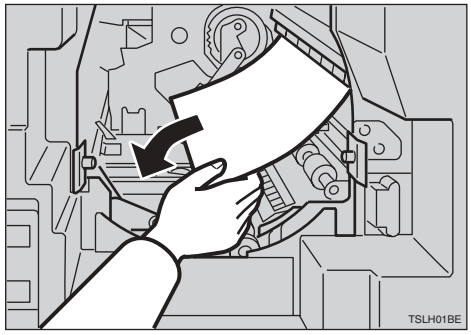
The paper is jammed between the drum and the paper feed section.

1 **Unlock the lever and then pull out the drum unit.**



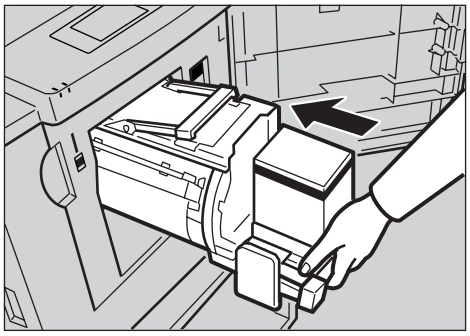
ANT054S

2 **Remove the misfed paper from inside.**



TSLH01BE

3 **Insert the drum until it locks into position, and then lower the lock lever.**



ANT061S

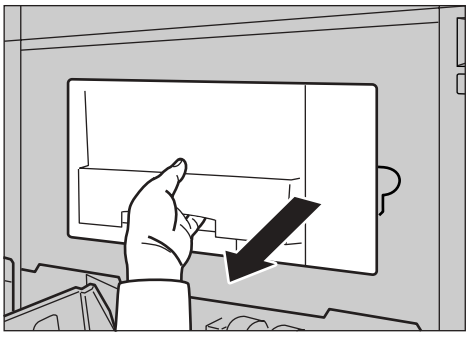
4 **Close the front cover.**

ANT059S

"↯ + B + E" Master Misfeeds in the Master Eject Section

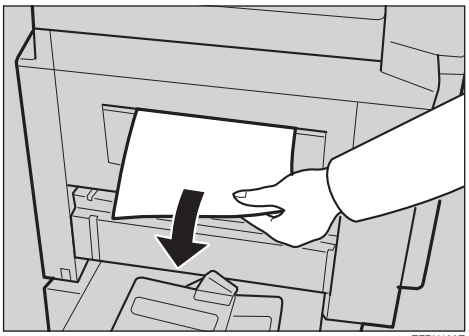
Either a master misfeed has occurred either in the master eject section, or the master is wrapped around the drum unit.

1 **Grip the handle and pull out the master eject box.**



ANT095S

2 **Remove the misfed master.**

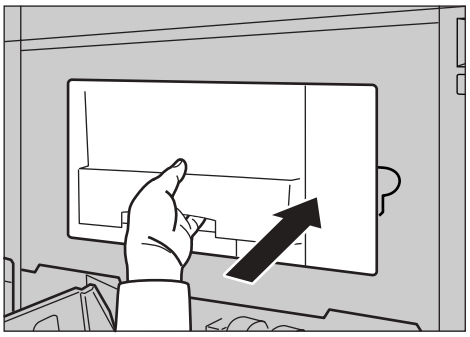


ZFRH120E

Note

❒ Be careful not to stain your hands with ink when you touch used masters.

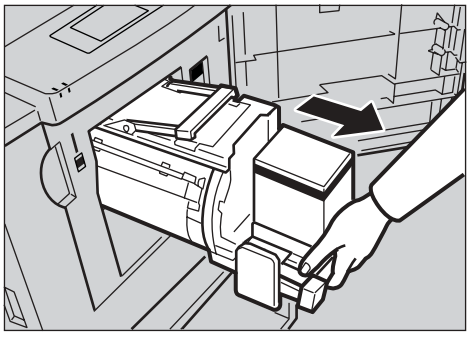
3 **Return the master eject box to its original position.**



ANT096S

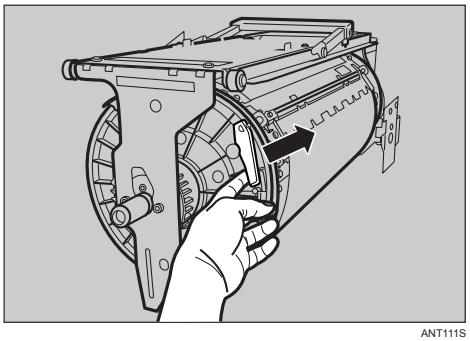
When the master is wrapped around the drum

1 **Unlock the lever and then pull out the drum unit.**



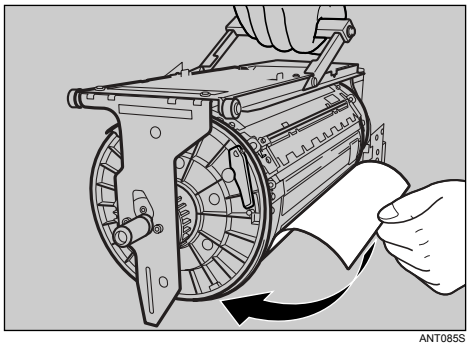
ANT054S

2 **Unlock the lever to open the clamp of drum unit.**



ANT111S

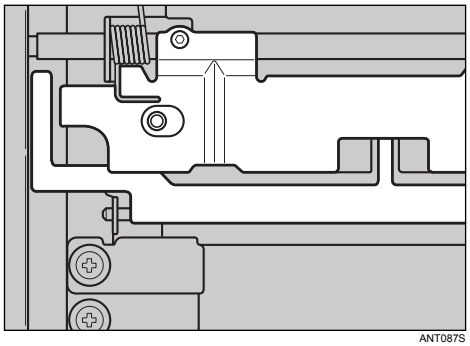
3 **Remove the misfed master.**



ANT085S

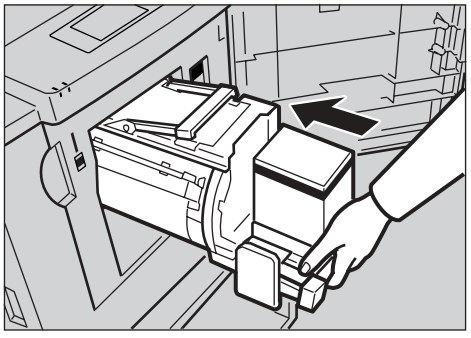
Note

❒ When the lever is released, the clamp will be set back. Make sure that the clamp is set correctly as showm.



ANT087S

4 **Insert the drum until it locks into position, and then lower the lock lever.**



ANT061S

5 **Close the front cover.**

ANT059S

When the Open Cover/Unit Indicator ( ) Lights and a Message is Displayed

A message is displayed explaining the place where the doors/covers are not properly closed.

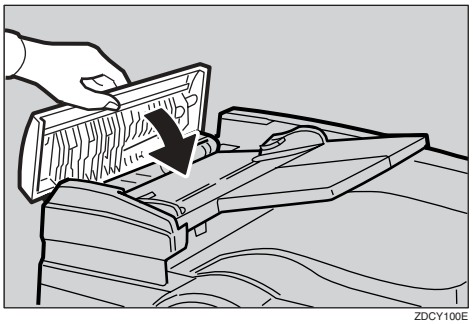
Front cover is Open

1 **Close the front cover completely.**

ANT059S

Cover of Optional Auto Document Feeder is Open

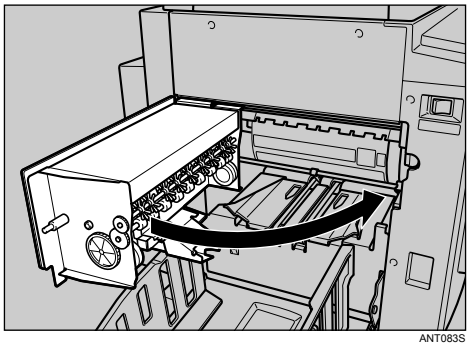
1 **Close the Auto Document Feeder until it clicks into place.**



ZDCY100E

Master Eject Unit is Open

1 **Close the master eject unit.**



ANT083S

When the Master End Indicator (🖨) Lights and a Message is Displayed

A message is displayed explaining the place in the master feed section that is not properly set.

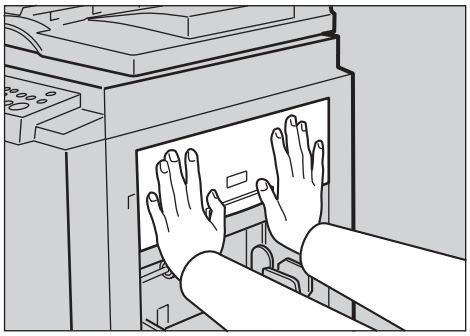
Master Feeding Cover is Open

1 **Close the master feeding cover firmly with both hands.**

ZFRH250E

Master Tray is Not Set Properly

1 **Push in the master tray completely.**

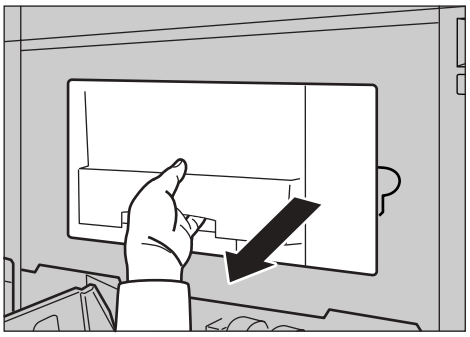


ANT066S

When the Master Eject Indicator (⏏) Lights

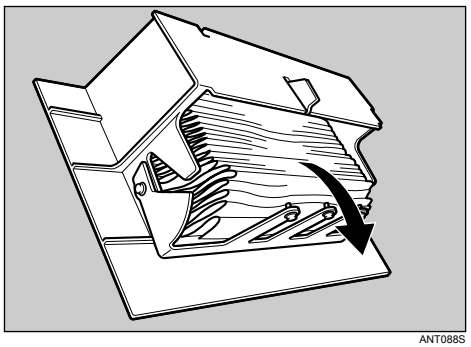
The master eject indicator (⏏) lights when it is time to empty master eject box.

1 **Grip the handle and pull out the master eject box.**



ANT095S

2 **Remove the used masters.**

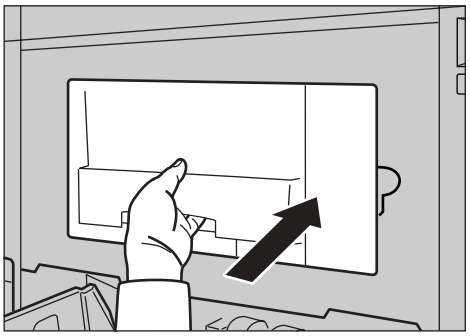


ANT088S

Note

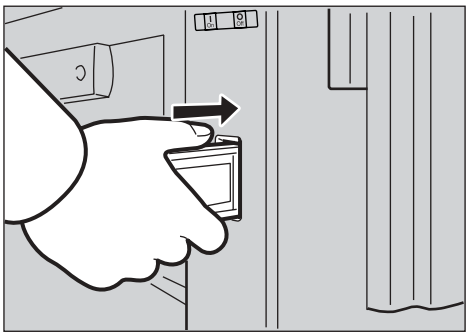
❒ Spread out an old newspaper, and then pour the used masters onto the newspaper. Throw away the used masters.

3 **Return the master eject box to its original position.**



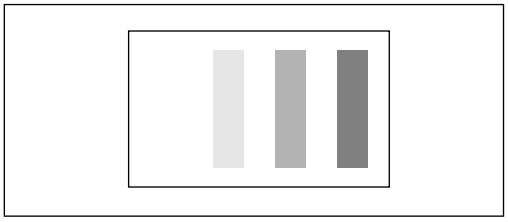
ANT096S

When Other Indicators Light

123 Set Key Counter.	The key counter (option) is not set. Slot in the key counter.  ZCTH130E

Poor Printing

Dirt on the Back Side of Paper



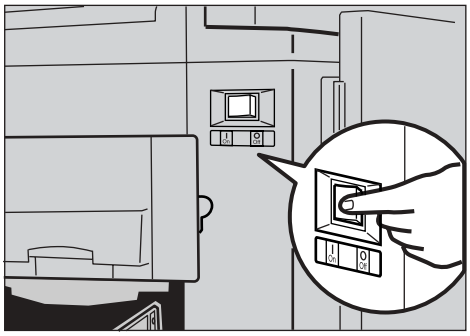
GRDIRT0E

Note

❒ When you use paper smaller than the original, select the proper reduction ratio. Otherwise, you might get dirty background prints.

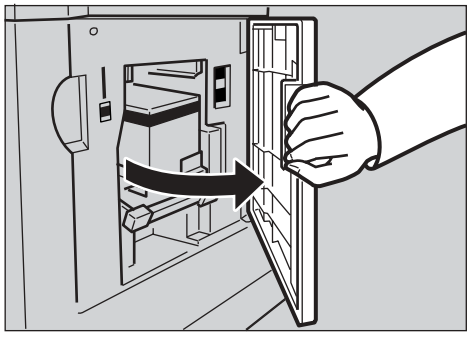
❒ When you use postcards, the background might be dirty because postcards do not absorb ink well.

1 **Turn off the main switch.**



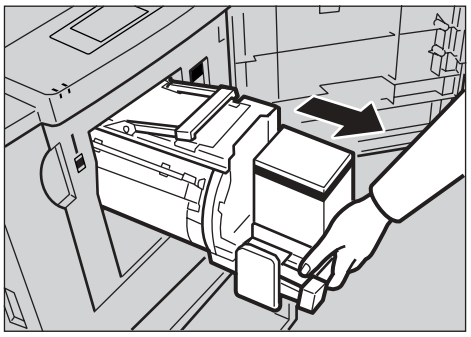
ANT076S

2 **Open the front cover.**



ANT057S

3 **Unlock the lever, and then pull out the drum unit.**

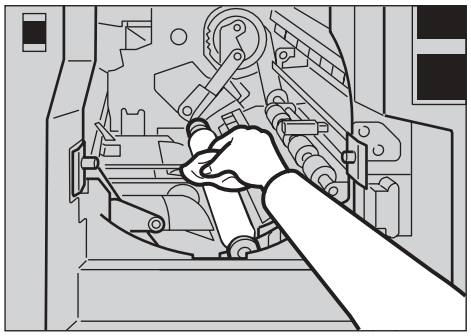


ANT054S

Reference

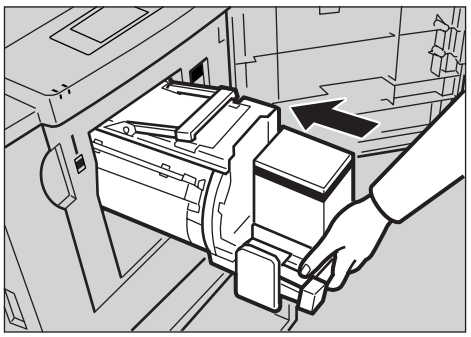
For details about how to remove the drum unit, see p.62 “Changing the Colour Drum Unit”.

4 **Clean the pressure roller with a clean cloth.**



ANT058S

5 **Insert the drum unit until it locks in position, and then lower the drum unit lock lever.**

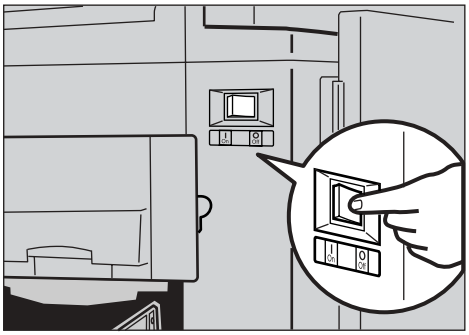


ANT061S

6 **Close the front cover.**

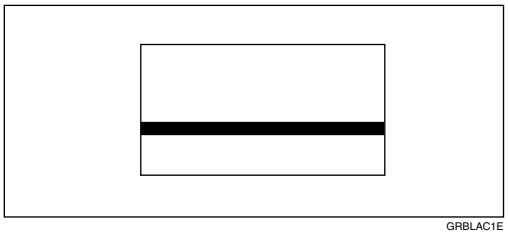
ANT059S

7 **Turn on the main switch.**



ANT077S

Dirt on the Front Side of Paper (Black Line/Stain)

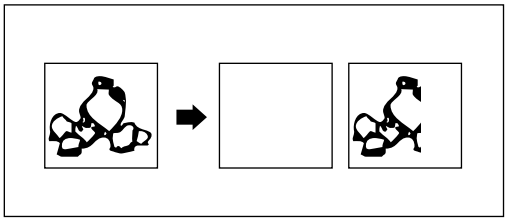


GRBLAC1E

Note

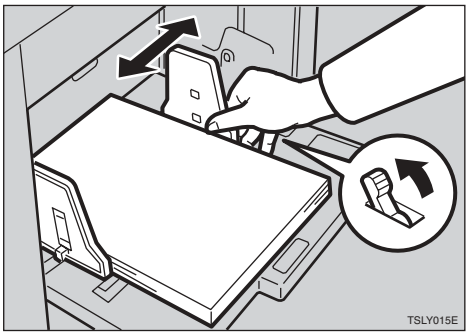
- ❒ If there is no margin or if there is a solid image area near the leading edge of the original, make a margin of at least 5mm, 0.2" at the leading edge. Otherwise, the paper exit pawl might become dirty and cause black lines on prints.
- ❒ Check the exposure glass cover and clean it if dirty. See p.116 “Maintaining the Machine”.
- ❒ Check the exposure glass and clean it if dirty. See p.116 “Maintaining the Machine”.
- ❒ When black lines or stains still appear on prints even if you clean the above, contact your service representative.

Blank Prints or Incomplete Prints



GRWHIT0E

- Make sure that the paper feed side plates touch the paper lightly. Shift the lock lever backward.



TSLY015E

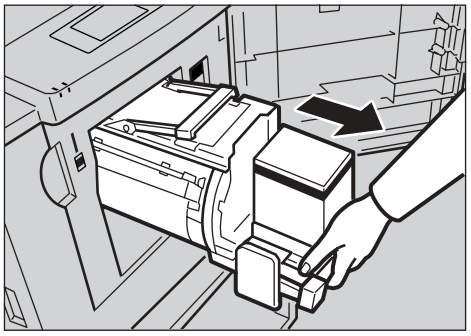
- When you use the optional Auto Document Feeder, make sure that the original guides contact the originals lightly.

When blank or incomplete prints persist even after you have checked the above, perform the following procedure.

1 Open the front cover.

ANT057S

2 **Unlock the lever and pull out the drum unit.**

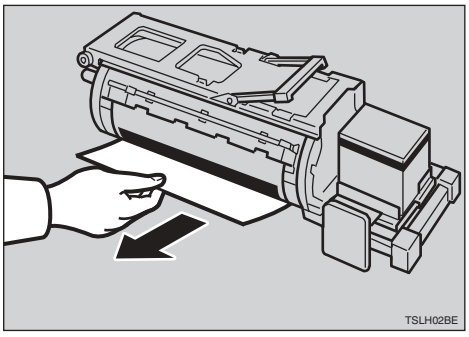


ANT054S

Reference

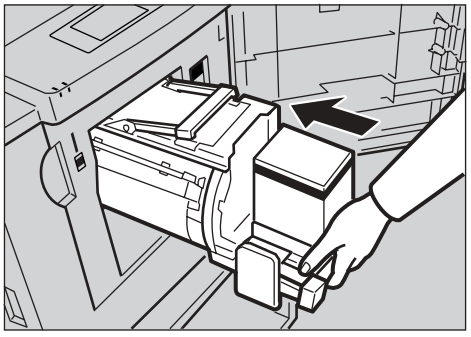
For details about how to remove the drum unit, see p.116 “Maintaining the Machine”.

3 **Remove paper that is stuck to the drum.**



TSLH02BE

4 **Insert the drum unit until it locks in position, then lower the drum unit lock lever.**



ANT061S

5 **Close the front cover.**

ANT059S

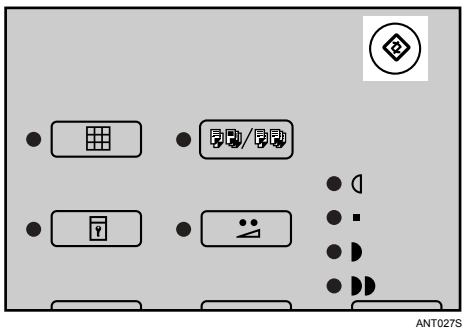
Accessing the User Tools

This section is intended for the machine administrator. The user tools allow the administrator to customize the default settings of this machine.

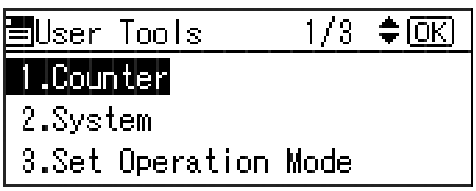
Reference

For the detailed user tool menu, see p.104 “User Tools Menu”.

1 **Press the【User Tools】key.**



2 **Use the【▲】【▼】keys to select the desired user tool.**



Reference

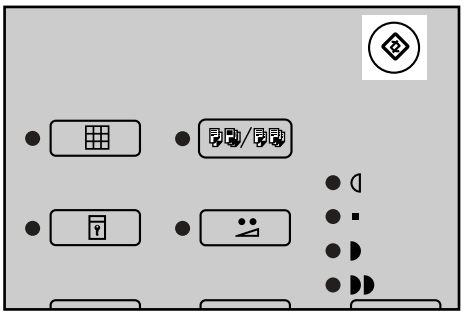
See p.104 “User Tools Menu”.

3 **Enter a number using the number keys or select the desired mode using the【▲】【▼】keys.**

4 **Press the【OK】key.**

Quitting User Tools

1 **To quit the User Tools menu, press the【User Tools】key.**



Note

❒ Changes made to the following user tools become effective when you press the【Clear Modes/Energy Saver】key.

- Program/Change Class
- Program/Change Memory
- ProgChnge:Clssss/Year
- Skip Feed

User Tools Menu

1 Counter

No.	Mode	Description
1	Counter Display	Shows the total number of masters and prints. **Note** ❒ The trial print will not be counted as part of the total.

2 System

No.	Mode	Description
1	Auto Reset Timer	The machine automatically returns to its initial condition if it has not been operated for a certain period of time. **Note** ❒ Default: *Off*
2	Disp. Resettable Counter	Shows the total number of masters and prints after resetting. **Note** ❒ The trial print will not be counted as part of the total.
3	Reset Resettable Counter	You can select whether or not to clear the number of resettable conter. **Note** ❒ Default: *Do not reset*
4	mm/inch	You can select the units of measurement used on the panel display. **Note** ❒ Default: • Metric version: *mm* • Inch version: *inch*
5	Language on LCD	You can select the language for the panel display. **Note** ❒ Default: *English*
6	Date/Time	You can set the date and time for the machine's internal clock using the number keys.
7	Energy Saver Option	You can select the energy saver mode from Enery Saving or Auto Off. **Note** ❒ Default: *Energy Saving*

No.	Mode	Description
8	Energy Saver Timer	You can specify the time taken for the machine to enter Energy Saver mode. **Note** ❒ Default: *3 min.* (minutes)
9	Auto Off Timer	You can select to use the auto off timer. **Note** ❒ Default: *Off*
10	Data Print	You can print the log data and the counter list.

3 Set Operation Mode

No.	Mode	Description
1	Minimum Print Quantity	You can set a minimum print quantity between 0 and 9999. Any number below the minimum will not be printed. **Note** ❒ Default: *0*
2	Maximum Print Quantity	You can set a maximum print quantity between 0 and 9999. **Note** ❒ Default: *9999*
3	Panel Beeper	You can turn the beeper on or off. **Note** ❒ Default: *Standard* ❒ Available settings: • All On (The beeper sounds either when you press a key or when warning messages are shown on the panel display.) • Standard (The beeper sounds only when warning messages are shown on the panel display and not when you press a key.) • All Off (The beeper does not sound at all.)
4	LCD Contrast	You can adjust the brightness of the panel display.
5	Class Display	Under the Memory/Class function, you can select to have "Select Class/Year" displayed as "Select Department" instead, when the machine is not limited to school or college use. **Note** ❒ Default: *School Year*

4 Initial Settings

No.	Mode	Description
1	Master Making Density	You can specify the image density that is selected by default when the power is turned on. **Note** ❒ Default: *Normal*
2	Original Type	You can specify the original type that is selected by default when the power is turned on. **Note** ❒ Default: *Text*
3	Ratio	You can specify the reproduction ratio that is selected by default when the power is turned on. **Note** ❒ Default: *100% (Full Size)*
4	Economy Mode	You can select to have Economy mode as either "On" or "Off" when the power is turned on, or after mode settings have been cleared. **Note** ❒ Default: *Off*
5	Erase Border Width	You can specify the edge erase margin. **Note** ❒ Default: *5 mm, 0.2"*
6	Program/ Change Class	To store settings of the Class mode, see p.51 "Storing Class Mode Settings".
7	Program/ Change Memory	To store settings of the Memory mode, see p.49 "Storing Normal Memory Mode Settings" and .p.50 "Storing Stack Memory Mode Settings"
8	Prog.Change: Class/Year	To store settings of the Select Class/Year, see p.53 "Registering Class/Year".

5 Mode Settings

No.	Mode	Description
1	Auto Cycle	You can select to have Auto Cycle mode as either "On" or "Off" when the power is turned on. **Note** ❒ Default: *On*
2	Background Correction	When you make prints in Photo, or Text/Photo mode, the background of the prints might appear dirty. In this case, you can select background correction to improve the clarity of your prints. **Note** ❒ Default: *Correct text mode only*
3	Longer Pape	If you are making prints on paper of custom sizes, you can set "Use". **Note** ❒ Default: *Do not Use*
4	Combine/ Repeat Priority	You can choose to have either Combine or Repeat selected by default when the power is turned on. **Note** ❒ Default: *Repeat Priority*
5	Cmb/Img Repeat Sep. Line	You can specify the type of separate line of combine and repeat. **Note** ❒ Default: *None*
6	Cancel Combine Setting	You can specify whether Combine/Repeat mode will be automatically cleared after you have finished your print job. **Note** ❒ Default: *Do not Cancel*
7	Skip Feed	You can specify the number of times that the drum rotates when in Skip Feed mode. . **Note** ❒ Default: *2 times* ❒ The time can be set from 2 to 9 times.
8	Memory Mode Setting	You can choose to have either Memory mode or Stack Memory mode as the default. **Note** ❒ Default: *Normal* (Memory mode)
9	Auto Class	Under the Class mode, the machine stops after it is finished a Class print job. When you select Auto Class, the machine stops for 2 seconds and then goes on to the next Class print job. **Note** ❒ Default: *Normal*

6 Administrator Tools

❖ **User Codes**

If user codes are turned on, operators must enter their user codes before they can operate the machine. The machine keeps count of the number of masters and prints made under each user code. See "3 Set User Code" below.

1	Display Counter(s)	You can check the number of masters and copies made under each user code.
2	Clear Counter(s)	You can clear each or all user code counters. **Reference** To clear the number of masters and copies, see p.110 "Clearing the Counter".
3	User Code Management	You can select whether or not to use User Code mode. **Note** ❒ Default: *Do not Use*
4	Key Counter Adjust	Normally, the optional key counter counts the number of prints regardless of the number of masters used. You can, however, add to the key counter a value between 0 and 50 to the key counter each time a new master is used. **Note** ❒ Default: *0 time* ❒ Range of adjustment: 0–50

7 Onine Settings

Limitation

❒ The optional PC controller is required.

No.	Mode	Description
1	Hold Data-in	You can select to have Hold Data-in mode either "On" or "Off" when the power is turned on, or after mode settings have been cleared. **Note** ❒ Default: *Off*

User Code

Under the User Code mode, users need to enter a user code before they can use the machine. The machine keeps count of the numbers of masters and prints under each user code.

Note

❒ To use this feature, User Code mode must be set to "Use". See "3 User Code Management" on p.108 "6 Administrator Tools".

❒ When the User Code mode is on, the machine will prompt you for your user code when you turn on the main switch, or after the machine has been reset.

❒ The following user codes are available:

- 000, 019, 028, 037, 046, 055, 064, 073, 082, 091, 100, 119, 128, 137, 146, 155, 164, 173, 182, 191, 200, 219, 228, 237, 246, 255, 264, 273, 282, 291, 300, 319, 328, 337, 346, 355, 364, 373, 382, 391, 400, 419, 428, 437, 446, 455, 464, 473, 482, 491, 500, 519, 528, 537, 546, 555, 564, 573, 582, 591, 600, 619, 628, 637, 646, 655, 664, 673, 682, 691, 700, 719, 728, 737, 746, 755, 764, 773, 782, 791, 800, 819, 828, 837, 846, 855, 864, 873, 882, 891, 900, 919, 928, 937, 946, 955, 964, 973, 982, 991

Entering the User Code to Use the Machine

1 Enter your 3–digit user code with the number keys.

```
Enter User Code, then
press the OK key.
  UserCode:■■■■
```

Note

❒ The user code will not displayed on the panel display.

❒ If you have made a wrong entry, press the 【Clear/Stop】 key and enter the number again.

2 Press the 【OK】 key.

3 Make your Prints.

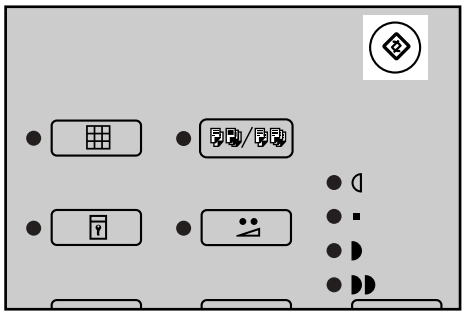
4 After printing, press the 【Clear Modes/Energy Saver】 key and the 【Clear/Stop】 key at the same time.

The User Code mode is once again set. Other users will not be able to make prints using your user code.

Clearing the Counter

You can clear each or all user code counters.

1 **Press the【User Tools】key.**



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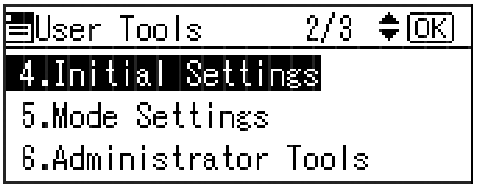
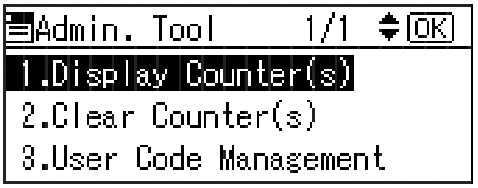
2 **Use the【▲】【▼】keys to select 6 Administrator Tools, and then press the【OK】key.**

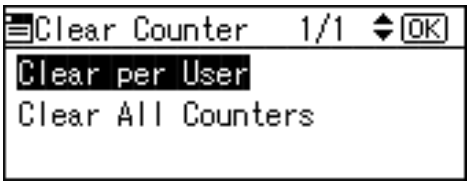


3 **Use the【▲】【▼】keys to select 2 Clear Counter, and then press the【OK】key.**

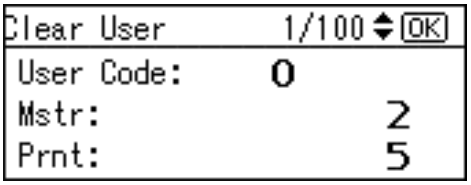


To clear the counter for each user code

❶ **Use the【▲】【▼】keys to select Clear per User.**



❷ **Use the【▲】【▼】keys to select the user code that you wish to clear.**



❸ **Press the【OK】key.**

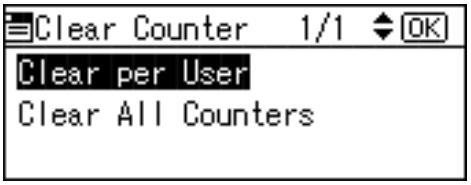
Note

❒ If you have selected the wrong user code, press the **【Escape】** key to return to the previous display.

❹ **Press the【OK】key.**

To clear the counters for all user codes

❶ **Use the【▲】【▼】keys to select Clear All Counters.**



❷ **Press the【OK】key.**

Operation Notes

General Cautions

- While printing, do not turn off the main switch.
- While printing, do not open the door or covers.
- While printing, do not unplug the power cord.
- While printing, do not move the machine.
- Keep corrosive liquids, such as acid, off the machine.
- Open and close the door and covers softly.
- Do not put anything except originals on the machine.
- Do not spill liquid on the machine.
- When opening or closing the door or covers, keep hold of them so they don't fall.
- When removing the drum unit from the machine, be careful not to let the drum unit fall.
- Do not modify or replace any parts other than the ones specified in this manual.
- Do not operate the machine without covers. You might get your fingers caught in the machine, or the machine might be damaged because, for example, dust or the like might get inside.
- Since some parts of the machine are sharp and might cause injury, touch only the parts specified in this manual.
- If you clean rubber parts with water, wipe them with a dry cloth afterwards.
- Always turn the machine off when you have finished printing for the day.
- If the machine must be transported by vehicle, please contact your service representative.
- Make sure to make a few trial prints to check the image position because the image position of the trial print might not correspond with that of the original.
- If the image registration is not consistent, slow the printing speed down to Setting 1.
- When performing duplex or multicoloured printing, leave the printed paper for a while before the next printing in order to let the ink dry on the printed paper. If this is not done, feed roller marks will appear on the print image.
- If the machine is not used for a long period, the image density might decrease because the ink on the drum might dry. Make extra prints until the image density recovers.

- When the machine is used in low temperature conditions, the image density might decrease. In this case, slow the printing speed down to step 1 or 2.
- When making duplex prints, misdetection of paper wrapping might occur if the paper delivery sensor detects a black area at the leading edge of the back side. Keep at least an 5 mm, 0.2" margin at the leading edge of the back side of the printing paper.
- Press the 【**Proof**】 key to perform a test print as the first few prints might be light.
- When making duplex prints or when using non-white printing paper, the paper end sensor might malfunction and fail to detect the paper. In this case, place a blank sheet under the printing paper on the paper feed tray.
- The outer portion of the image might not be printed under low temperature. In this case, slow the printing speed down to step 1 or 2, or increase the room temperature.
- The paper exit pawl might contact the printing paper and cause black lines on the prints. In this case, increase the printing speed or make a new master with lighter image density mode.
- If you cannot pull out the drum, close the front cover again to rotate the drum. Pull out the drum after it stopped at the position.

- The leading edge of the prints might become stained if the edge touches the image of prints on the paper delivery tray.
- The ink of the print on the paper delivery tray might stick to the back side of the next print.
- When the machine is on and the power source is less than 90% of the specified amount, printing quality will decrease. Therefore, make sure the supply from your electrical outlet is at least 90% of the required amount.
- As various kinds and qualities of paper exist, some paper might be wrapped around the drum or cause misfeeds.
- If your hands are stained with ink:
  - Avoid prolonged or repeated contact with skin.
  - Cleanse skin thoroughly after contact, before breaks and meals, and at the end of the work period.
  - Ink is readily removed from skin by waterless hand cleaners followed by washing with soap and water.
- Also, be careful not to get any ink on your clothing while emptying the master eject box or while loading a new ink cartridge.
- The image density varies according to the printing speed and the room temperature. So, adjust the printing speed or increase the room temperature.
- When you make a lot of prints from a small image, ink might ooze out from the edges of the master, especially under high temperature and when printing in two or more colours. In this case, make a new master.
- Use ink made within one year. Ink stored for a long period tends to dry slowly and yield lower image density.

- While making a master, do not leave the exposure glass cover or optional Auto Document Feeder open.
- In Letter/Photo mode, moire patterns might occur when screened originals are printed. In this case, make prints in Letter or Photo mode.
- When you use originals with light lettering, edges of the letters might be printed clearly and the inside of the letters might be light. In this case, increase the image density.
- When marks on the printing paper occur, clean the paper feed roller. See p.116 “Maintaining the Machine”.
- If you make a print before the ink on the first print dries, the ink may adhere to the paper feed roller and soil the print. Before printing on the reverse side of a printed sheet or overprinting on a printed sheet, be sure that the ink on the first print is adequately dry.

Print Paper

- When the paper is curled, stack the paper with the curl face down, otherwise the paper might wrap around the drum or stains might appear.
- Postcards and the like do not absorb ink well. Offset images might appear on the rear side of subsequent prints. Solid image originals will cause offset image prints.

Originals

- If there is no margin or if there is a solid image area near the leading edge of the original, make at least a 5 mm, 0.2", margin at the leading edge; otherwise, the paper might wrap around the drum or the paper exit pawl might become dirty and cause black lines on prints.
- If you use originals that have bold letters or solid images at the leading edges, you might get prints with dirty edges. In this case, insert the widest margin first, or raise the printing speed.
- Under the following conditions, the machine might not detect the original on the exposure glass. If you press the 【**Master Making**】 mode select key again, the machine will start making a master anyway:
  - When you set a dark original on the exposure glass.
  - When the original is not centered according to the size marks on the right scale.
  - If you do not open the exposure glass cover at an angle of more than 30° with the exposure glass when you replace originals.
  - If the machine is installed under a strong light.

Where to Put Your Machine

Your machine's location should be carefully chosen because environmental conditions greatly affect its performance.

Environmental Conditions

Optimum environmental conditions

⚠ ***CAUTION:***

- *Keep the machine away from humidity and dust. Otherwise a fire or an electric shock might occur.*
- *Do not place the machine on an unstable or tilted surface. If it topples over, an injury might occur.*

⚠ ***CAUTION:***

- *If you use the machine in a confined space, make sure there is a continuous air turnover.*

⚠ ***CAUTION:***

- *After you move the machine, use the caster fixture to fix it in place. Otherwise the machine might move or come down to cause an injury.*

- Temperature: 10 – 30°C, 50 – 86°F
- Humidity:
  - Main Frame: 20 – 90%RH
  - Auto Document Feeder (option): 20 – 70%RH
- A strong and level base (a sturdy desk and cabinet etc.).
- The machine must be level within 5 mm, 0.2" both front to rear and left to right.
- Make sure to locate this machine in a large well ventilated room that has an air turnover of more than 30 m^3/hr/person.

Environments to avoid

- Locations exposed to direct sunlight or strong light (more than 1500 lux).
- Locations directly exposed to cool air from an air conditioner or heated air from a heater. (Sudden temperature changes might cause condensation within the machine.)
- Places where the machine might be subjected to frequent strong vibration.
- Dusty areas.
- Areas with corrosive gases.

Power Connection

⚠ ***WARNING:***

- ***Connect the power cord directly into a wall outlet and never use an extension cord.***
- ***Only connect the machine to the power source describe in the manual.***
- ***Do not damage, break or make any modifications to the power cord. Do not place heavy objects on it. Do not pull it hard nor bend it more than necessary. These actions could cause an electric shock or fire.***

⚠ ***CAUTION:***

- *Unplug the power cord from the wall outlet before you move the machine. While moving the machine, you should take care that the power cord will not be damaged under the machine.*

⚠ ***CAUTION:***

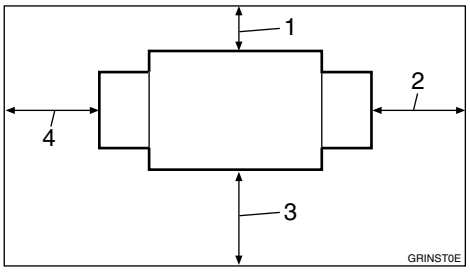
- *When you disconnect the power plug from the wall outlet, always pull the plug (not the cable).*

- The socket-outlet shall be installed near the machine and shall be easily accessible.
- Voltage must not fluctuate more than 10%.

Access to Machine

Place the machine near the power source, providing clearance as shown.

❖ **Main Frame**



1. **More than 10 cm, 4.0"**
2. **More than 60 cm, 23.7"**
3. **More than 60 cm, 23.7"**
4. **More than 60 cm, 23.7"**

Maintaining the Machine

To maintain high print quality, clean the following parts and units regularly.

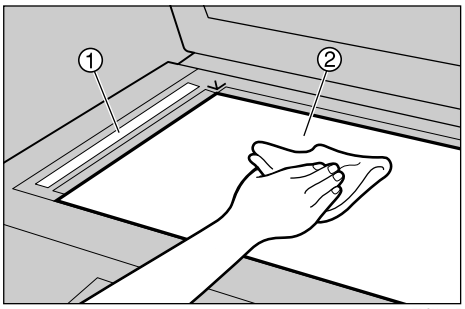
Main Frame

Exposure Glass

1. **Lift the exposure glass cover or optional Auto Document Feeder.**
2. **Clean ① and ②.**

Note

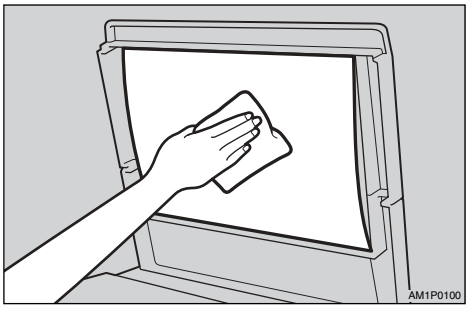
❒ When using the exposure glass, clean ② only.



ZDCH130E

Exposure Glass Cover

1. **Lift the exposure glass cover.**
2. **Clean the exposure glass cover with a damp cloth and wipe it with a dry cloth.**

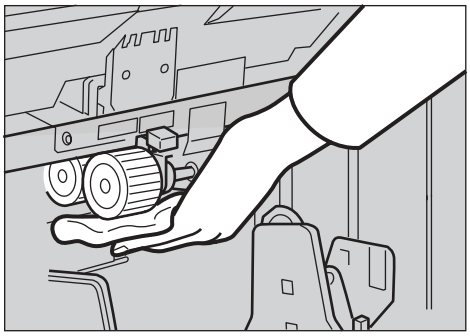

AM1P0100

Note

❒ If you do not clean the exposure glass cover, marks on the cover will be printed.

Paper Feed Roller (paper feed tray)

1. **Wipe off the paper dust on the paper feed roller with a damp cloth, then wipe it with a dry cloth.**


ANT093S

Note

❒ If you do not clean the paper feed roller, paper misfeeds tend to occur.

Optional Document Feeder

Cleaning the Sheet

1. **Lift the document feeder.**
2. **Clean the sheet with a damp cloth and wipe it with a dry cloth.**

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Note

❒ If you do not clean the sheet, marks on the sheet will be printed.

Main Frame

❖ **Configuration:**
Desk top

❖ **Printing Process:**
Full automatic one drum system

❖ **Original Type:**
Sheet/Book

❖ **Original Size:**
Maximum 297 mm × 432 mm, 11.7" × 17.0"

❖ **Pixel Density:**
300 × 300 dpi (in Fine mode 300 × 400 dpi)

❖ **Image Mode:**
Text mode
Text/Photo mode
Photo mode
Pale Mode

❖ **Reduction Ratios:**

- Inch version:
  93%, 77%, 74%, 65%
- Metric version:
  93%, 87%, 82%, 71%

❖ **Enlargement Ratios:**

- Inch version:
  155%, 129%, 121%
- Metric version:
  141%, 122%, 115%

❖ **Printing Area:**

- LG drum (Not Available):
  210 mm × 355 mm, 8.3" × 14.0"
- A4 drum (Type 1):
  210 mm × 288 mm, 8.3" × 11.3"
- B4 drum (Type 2):
  250 mm × 355 mm, 9.8" × 14.0"

❖ **Print Paper Size:**
Maximum 275 mm × 395 mm, 10.9" × 15.6"
Minimum 90 mm × 140 mm, 3.5" × 5.5"

❖ **Leading Edge Margin:**
5 mm ± 3 mm, 0.2" ± 0.12"

❖ **Print Paper Weight:**
47.1 g/m^2 to 209.3 g/m^2, 12.5 lb to 55.6 lb

❖ **Print Speed:**
80 – 130 rpm (3 steps)

❖ **First Copy Time (Master Process Time):**
32.0 seconds (A4□, $8^1/_2$" × 11"□)
(When setting an original on the exposure glass)

❖ **Second Copy Time (First Print Time):**
33.0 seconds (A4□, $8^1/_2$ " × 11"□)
(When setting an original on the exposure glass)

❖ **Colour Printing:**
Drum unit replacement system (black, red, blue, green, brown, yellow, purple, navy, maroon, orange, teal and gray)

❖ **Image Position Adjustment:**

- Vertical:
  ± 10 mm, ± 0.39"
- Side:
  10 mm, 0.39" (for either side)

❖ **Paper Feed Tray Capacity:**
1,000 sheets (64 g/m^2, 17 lb)

❖ **Paper Delivery Tray Capacity:**
1,000 sheets (64 g/m^2, 17 lb)

❖ **Master Eject Box Capacity:**
30 masters

❖ **Dimensions (W × D × H):**

	Width	Depth	Height
Stored	750 mm, 29.5"	676 mm, 26.6"	633 mm, 24.9"
Stored with Auto Document Feeder	750 mm, 29.5"	676 mm, 26.6"	686 mm, 27.0"
Set up	1,244 mm, 49.0"	676 mm, 26.6"	633 mm, 24.9"
Set up with Auto Document Feeder	1,244 mm, 49.0"	676 mm, 26.6"	686 mm, 27.0"

❖ Weight:

- Main Frame: 70 kg, 154.3 lb
- Main Frame with optional Auto Document Feeder: 75 kg, 165.3 lb

❖ Noise Emission *1:

Sound Power Level

	Printing Speed	Noise Emission
Stand-by	--	36 dB(A)
During printing	130 cpm	84 dB(A)

Sound Pressure Level*2

	Printing Speed	Noise Emission
Stand-by	--	20 dB(A)
During printing	130 cpm	72 dB(A)

*1 The above measurement made in accordance with ISO 7779 are actual value.
*2 It is measured at the position of the operator.

❖ Power Source:

See the inside front cover of this manual.

❖ Power Consumption:

Stand-by	Less than 0.023 kW
Master Making	Less than 0.135 kW
Printing: Speed 1	Less than 0.14 kW
Printing: Speed 2	Less than 0.155 kW
Printing: Speed 3	Less than 0.175 kW

❖ Optional Equipment:

- Colour Drum
  LG Drum
  A4 Drum
  B4 Drum
- Key Counter
- Tape Dispenser
- Auto Document Feeder

Auto Document Feeder (ADF)

❖ **Mode:**
- ADF mode

❖ **Original size:**
- A3 – A5
- 11" × 17" – $5^1/_2$" × $8^1/_2$"

❖ **Original weight:**
- One-sided originals: 52 – 105 g/m^2 (14 – 28 lb)

❖ **Number of originals to be set:**
- 30 sheets (80 g/m^2, 20 lb)

❖ **Maximum power consumption:**
- less than 25 W (power is supplied from the main unit.)

❖ **Dimensions (W × D × H):**
- 550 × 470 × 90 mm, 21.7" × 18.6" × 3.6"

❖ **Weight:**
- 7 kg (15 lb) or less

Note

❒ Specifications are subject to change without notice.

Consumables

Name	Size	Remarks
Master for LG drum	Length: 125 m, 410ft/roll Width: 240 mm, 9.5" 2 Rolls/case	260 masters can be made per roll
Master for A4 drum	Length: 125 m, 410ft/roll Width: 240 mm, 9.5" 2 Rolls/case	300 masters can be made per roll
Master for B4 drum	Length: 125 m, 410ft/roll Width: 280 mm, 11.0" 2 Rolls/case	260 masters can be made per roll
Ink-Black	600ml/pack, 5 packs/case	Environmental conditions: – 5 to 40°C, 10 to 95%RH
Ink-Red	600ml/pack, 5 packs/case	
Ink-Blue	600ml/pack, 5 packs/case	
Ink-Green	600ml/pack, 5 packs/case	
Ink-Brown	600ml/pack, 5 packs/case	
Ink-Yellow	600ml/pack, 5 packs/case	
Ink-Purple	600ml/pack, 5 packs/case	
Ink-Navy	600ml/pack, 5 packs/case	
Ink-Maroon	600ml/pack, 5 packs/case	
Ink-Orange	600ml/pack, 5 packs/case	
Ink-Teal	600ml/pack, 5 packs/case	
Ink-Gray	600ml/pack, 5 packs/case	
Tape for Tape dispenser	35 m (114.8 ft)/roll	

Note

❒ Specifications are subject to change without notice.

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CE

Declaration of Conformity

“The Product complies with the requirements of the EMC Directive 89/336/EEC and its amending directives and the Low Voltage Directive 73/23/EEC and its amending directives.”

In accordance with IEC 60417, this machine uses the following symbols for the main switch:

| means POWER ON.

○ means POWER OFF.

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Operating Instructions